Columbia Analytical Services™ 1 Mustard Street, Suite 250, Rochester, NY 14609-6925 | 585.288.5380 | www.caslab.com

October 5, 2009

Mr. Frank Hagar
Northgate Environmental
1100 Quail Street
Suite 102
Newport Beach, CA 92660

Re: Tronox LLC Henderson #2027.001
Service Request #R0904817

Dear Mr. Hagar:

Enclosed is the analytical data report for the above referenced facility. A total of one sample was received by our laboratory on August 25, 2009.

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,
COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

cc: Ms. Cindy Arnold
Northgate Environmental
2501 Geigel Avenue
Orlando, FL 32806

This report contains a total of 47 pages.

CASE NARRATIVE

COMPANY: Northgate Environmental
Tronox LLC Henderson Project #2027.001
SERVICE REQUEST #: R0904817

Northgate sample was collected on 08/24/09 and received at CAS on 08/25/09 in good condition. Columbia Analytical Services' (CAS) reporting limit has been expressed as the Method Reporting Limit (MRL) rather than the Practical Quantitation Limit (PQL). At the client's request, all results have been reported to the Method Detection Limit (MDL) where an MDL is performed on that parameter. The MDL for SPLP parameters is the aqueous MDL.

INORGANICS

One soil sample was extracted by SPLP fluid #2 and SPLP #3 and were analyzed for a site specific list of inorganics. Please see attached data pages for method numbers. The LCS' for these samples were spiked at the bench rather than prior to the SPLP extraction at the client's request.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits except the replicate LCS for Hexavalent Chromium and has been flagged with an "*" The sample could not be repeated within holding time so the data was accepted.

The Laboratory blanks associated with these analyses were free of contamination except the SPLP blanks had low level hits for Alkalinity, Bicarbonate alkalinity, Nitrate, TOC, Chloride, Phosphorus, Ammonia and Sulfate. All affected data has been flagged with a "B".

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

One soil sample was extracted by SPLP fluid #3 and analyzed for a site specific list of Volatiles by Method 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within Tronox limits except Isopropylbenzene, 4-Isopropyltoluene, Tetrachloroethene, Trichlorofluoromethane, sec-Butylbenzene and ter-Butylbenzene were outside limits on the 09/10/09 LCS. All LCS outliers were within 60-140%. All outlying QC has been flagged with an "*".

The Laboratory blanks associated with these samples were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

SEMIVOLATILE ORGANICS

One soil sample was extracted by SPLP fluid #2 and SPLP fluid #3 and analyzed for a site specific list of Semivolatiles by method 8270C low level from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except SA64-10BSPLP2 and SA64-10BSPLP3. The samples were repeated and again the internal standards were outside limits. Both sets of data have been reported and all outlying internal standards have been flagged with an "*".

All surrogate standard recoveries were within Tronox limits except SA64-10BSPLP3. The sample was repeated an again the surrogates. Both sets of data have been reported out and all outlying internal standards have been flagged with an "*". Please note: the outlying internal standard probably caused a high bias on the surrogate.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within Tronox limits except Pyridine and 1,4-Dioxane. All QC outliers were within 10-150%. All RPD's were within limits except Pyridine on the 09/02/09 LCS/LCSD. All outlying QC has been flagged with a "*".

The Laboratory Blanks associated with these analyses were free of contamination except the 09/02/09 blanks had a low level hit for Butyl benzyl phthalate. All affected data has been flagged with a "B".

All samples were extracted and analyzed within holding times.

No other analytical or QC problems were encountered.

DIESEL RANGE AND OIL RANGE ORGANICS

One soil sample was extracted by SPLP fluid #2 and SPLP fluid #3 and analyzed for Diesel and Oil Range Organics by method 8015B from SW-846.

All initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries and RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package have by authorized by the Laboratory Manager or his designee, as verified by the following signature.

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 2027.001
Submission: R0904817
Client: Northgate Environmental
Client Rep: JJAEGER
Project: Tronox LLC Henderson

Batch Complete: Yes
Diskette Requested: Yes
Date: 9/2/09
Custody Seal: Present/Absent:
Chain of Custody: Present/Absent:

Date Revised:
Date Due: 9/15/09
Protocol: SW846
Shipping No.:
SDG #: SA64-10BSPLP2

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R0904817-001	SA64-10BSPLP2	Soil	EPA 1312, 120.1, 8270C, 8015B, SM 2320 B, 9056, 9056 Modified, 365.1 Modified, SM 5540 C, SM 2540 D, 353.2M, 9060, 9040B Modified, SM 2540 C, 9012A, 350.1M, 7199	8/24/09	8/25/09			
R0904817-002	SA64-10BSPLP3	Soil	EPA 1312, 120.1, 8260B, 8270C, 8015B, 7199, SM 2320 B, 350.1M, 9056, 9012A, 9056 Modified, 365.1 Modified, SM 2540 C, SM 5540 C, 9040B Modified, 9060, 353.2M, SM 2540 D	8/24/09	8/25/09			

Folder Comments:

Columbia Analytical Services

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.0623
Page: 2 of 2
Cooler # 1 of 5

Collection Area: II

Required Ship to Lab:

Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.
Address	1 Mustard Street, Suite 250
	Rochester, NY 14609
Lab PM:	Janice Jaeger
Phone/Fax:	(585)288-5380
Lab PM email	jjaeger@caslab.com
Applicable Lab Quote #	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City	Henderson
State	NV
Site PM Name	Derrick Willis
Phone/Fax:	(949) 375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send Invoice to:	Susan Crowley Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949) 260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush		Mark One	
If Rush, Date due					
QC level Required: Standard		Special	EPA Stage 4	Mark one	
NJ Reduced Deliverable Package?					
MA MCP Cert?		CT RCP Cert?		Mark One	

Lab Project ID (lab use)

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER WW; FREE PRODUCT LF; SOIL SO; OIL OIL; WIPE SW; AMBIENT AIR AA; SVE AIR AE; SOIL GAS GS; WATER W; SURFACE WATER WS; WATER QC WQ; SLUDGE SL; RINSATE WH; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 1312/8260B VOC	EPA 1312/8260B Org/Wet Chem	EPA 1312/8015B DRO/D	EPA 1312/7199	EPA 1312/8015B GRO/D	EPA 1312/CASK LIST	SW 846/8260B VOCs	Comments/Lab Sample I.D.
1	SA64-10BSPLP	SO	G	8/24/2009	8:34	1	N	X								X							2 oz Teflon lined glass
2	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X									X						2 x 8 oz glass jars
3	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X										X					2 x 8 oz glass jars
4	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X													X	X	2 x 8 oz glass jars
5	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X														X	2 x 8 oz glass jars
6																							
7																							
8	PF 8-24-09																						
9																							
10																							
11																							
12																							

Additional Comments/Special Instructions:

All samples on this page are SPLPs and require two leachates: pH adjusted water and pore water.

Organics/WetChem includes: EPA 8270C, SM 2320B, EPA 350.1, EPA 365.1, EPA 9045C, EPA 9056, SM5540C (Mod), Lloyd Kahn (TOC), EPA 160.3M (%solids), EPA 353.2 (Nitrite), EPA 300.1 (Chlorate), and EPA 9012A

CASK List includes: EPA 314.0, EPA 6020, EPA 7471A

All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs. Notifications provided to:
cindy.arnold@ngem.com and frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Patrick Ferringer GES	8-24	1700	Matt Cam / CAS	8/25/09	1100

Sample Receipt Conditions

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Patrick Ferringer

SIGNATURE of SAMPLER: Patrick Ferringer

DATE Signed: 8-24 Time: 1440

Temp in OC | Samples on Ice? | Sample intact? | Trip Blank?

R0904817
Northgate Environmental
Tronox LLC Henderson

Cooler Receipt And Preservation Check Form

Project/Client Henderson Soil Submission Number R09-4017

Cooler received on 8/25/09 by: MWC **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant* air bubbles?	YES	(NO)	N/A		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(CAS/ROC, CLIENT)				
7.	Temperature of cooler(s) upon receipt:	3°	4°			
	Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 8/25/09 1015

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: MM 8/25/09

Cooler Breakdown: Date : 8/25/09 by: MWC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO	
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO	
3.	Were correct containers used for the tests indicated?	(YES)	NO	
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated			(N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 04/309-10

Other Comments:

PC Secondary Review: MM 9/2/09 *significant air bubbles are greater than 5-6 mm

H:\SMODOCS\Cooler Receipt 2.doc

Cooler Receipt And Preservation Check Form

Project/Client Henderson sc: 1 Submission Number R09-4817

Cooler received on 8/25/09 by: MWC **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO	
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO	
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO	
4.	Did any VOA vials have significant* air bubbles?	YES	(NO)	N/A
5.	Were **Ice or Ice packs** present?	(YES)	NO	
6.	Where did the bottles originate?	CAS/ROC, CLIENT		

7. Temperature of cooler(s) upon receipt:	3°	4°	3°	3°	5°	6°
Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)
If No, Explain Below	No	No	No	No	No	

Date/Time Temperatures Taken: 8/25/09 1015

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: MWC 8/25/09

Cooler Breakdown: Date : 8/25/09 by: MWC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO

4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 04309-10

Other Comments:

PC Secondary Review: MWC 8/25/09 *significant air bubbles are greater than 5-6 mm

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/27/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.23	U	1.0	0.23	1	NA	9/10/09 12:50		169786	
Isopropylbenzene (Cumene)	0.36	U	2.0	0.36	1	NA	9/10/09 12:50		169786	
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	1	NA	9/10/09 12:50		169786	
1,1,2-Trichloroethane	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	
1,1-Dichloroethane (1,1-DCA)	0.64	U	1.0	0.64	1	NA	9/10/09 12:50		169786	
1,1-Dichloroethene (1,1-DCE)	0.59	U	1.0	0.59	1	NA	9/10/09 12:50		169786	
1,1-Dichloropropene	0.39	U	2.0	0.39	1	NA	9/10/09 12:50		169786	
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	1	NA	9/10/09 12:50		169786	
1,2,3-Trichloropropane	0.64	U	2.0	0.64	1	NA	9/10/09 12:50		169786	
1,2,4-Trichlorobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:50		169786	
1,2,4-Trimethylbenzene	0.53	U	2.0	0.53	1	NA	9/10/09 12:50		169786	
1,2-Dibromo-3-chloropropane (DBCP)	0.61	U	5.0	0.61	1	NA	9/10/09 12:50		169786	
1,2-Dibromoethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:50		169786	
1,2-Dichloroethane	0.42	U	1.0	0.42	1	NA	9/10/09 12:50		169786	
1,2-Dichloropropane	0.36	U	1.0	0.36	1	NA	9/10/09 12:50		169786	
1,3,5-Trimethylbenzene	0.37	U	2.0	0.37	1	NA	9/10/09 12:50		169786	
1,3-Dichlorobenzene	0.84	U	2.0	0.84	1	NA	9/10/09 12:50		169786	
1,3-Dichloropropane	0.51	U	2.0	0.51	1	NA	9/10/09 12:50		169786	
1,4-Dichlorobenzene	0.44	U	2.0	0.44	1	NA	9/10/09 12:50		169786	
2,2-Dichloropropane	0.42	U	2.0	0.42	1	NA	9/10/09 12:50		169786	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	9/10/09 12:50		169786	
2-Chlorotoluene	0.48	U	5.0	0.48	1	NA	9/10/09 12:50		169786	
2-Hexanone	0.78	U	10	0.78	1	NA	9/10/09 12:50		169786	
2-Methyl-2-propanol	11	U	100	11	1	NA	9/10/09 12:50		169786	
4-Chlorotoluene	0.52	U	5.0	0.52	1	NA	9/10/09 12:50		169786	
4-Isopropyltoluene	0.42	U	2.0	0.42	1	NA	9/10/09 12:50		169786	
4-Methyl-2-pentanone	0.71	U	10	0.71	1	NA	9/10/09 12:50		169786	
Acetone	1.6	U	20	1.6	1	NA	9/10/09 12:50		169786	
Benzene	0.42	U	1.0	0.42	1	NA	9/10/09 12:50		169786	
Bromobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:50		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/27/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromochloromethane	0.54	U	2.0	0.54	1	NA	9/10/09 12:50		169786	
Bromodichloromethane	0.84	U	1.0	0.84	1	NA	9/10/09 12:50		169786	
Bromoform	0.32	U	1.0	0.32	1	NA	9/10/09 12:50		169786	
Bromomethane	0.58	U	2.0	0.58	1	NA	9/10/09 12:50		169786	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	9/10/09 12:50		169786	
Chlorobenzene	0.44	U	1.0	0.44	1	NA	9/10/09 12:50		169786	
Chloroethane	0.36	U	2.0	0.36	1	NA	9/10/09 12:50		169786	
Chloroform	0.18	U	1.0	0.18	1	NA	9/10/09 12:50		169786	
Chloromethane	0.96	U	2.0	0.96	1	NA	9/10/09 12:50		169786	
Dibromochloromethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
Dibromomethane	0.54	U	1.0	0.54	1	NA	9/10/09 12:50		169786	
Dichlorodifluoromethane (CFC 12)	0.53	U	1.0	0.53	1	NA	9/10/09 12:50		169786	
Dichloromethane	0.50	U	2.0	0.50	1	NA	9/10/09 12:50		169786	
Diisopropyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:50		169786	
Ethyl tert-Butyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:50		169786	
Ethylbenzene	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
Hexachlorobutadiene	0.93	U	5.0	0.93	1	NA	9/10/09 12:50		169786	
Methyl tert-Butyl Ether	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	
Naphthalene	0.37	U	2.0	0.37	1	NA	9/10/09 12:50		169786	
Styrene	0.37	U	1.0	0.37	1	NA	9/10/09 12:50		169786	
Tetrachloroethene (PCE)	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
Toluene	0.42	U	1.0	0.42	1	NA	9/10/09 12:50		169786	
Trichloroethene (TCE)	0.63	U	1.0	0.63	1	NA	9/10/09 12:50		169786	
Trichlorofluoromethane (CFC 11)	0.48	U	1.0	0.48	1	NA	9/10/09 12:50		169786	
Vinyl Chloride	0.52	U	1.0	0.52	1	NA	9/10/09 12:50		169786	
cis-1,2-Dichloroethene	0.48	U	1.0	0.48	1	NA	9/10/09 12:50		169786	
cis-1,3-Dichloropropene	0.38	U	1.0	0.38	1	NA	9/10/09 12:50		169786	
m,p-Xylenes	0.85	U	1.0	0.85	1	NA	9/10/09 12:50		169786	
n-Butylbenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:50		169786	
n-Propylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:50		169786	
o-Xylene	0.56	U	1.0	0.56	1	NA	9/10/09 12:50		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
		Pre-Prep Date:	8/27/09
Sample Name:	SA64-10BSPLP3	**Units:**	µg/L
Lab Code:	R0904817-002	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
sec-Butylbenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:50		169786	
tert-Amyl Methyl Ether	0.21	U	1.0	0.21	1	NA	9/10/09 12:50		169786	
tert-Butylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:50		169786	
trans-1,2-Dichloroethene	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	
trans-1,3-Dichloropropene	0.25	U	1.0	0.25	1	NA	9/10/09 12:50		169786	
1,1,1-Trichloroethane (TCA)	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	70-130	9/10/09 12:50		
Dibromofluoromethane	105	70-130	9/10/09 12:50		
Toluene-d8	111	70-130	9/10/09 12:50		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/27/09

Sample Name: Method Blank
Lab Code: RQ0907884-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.23	U	1.0	0.23	1	NA	9/10/09 12:21		169786	
Isopropylbenzene (Cumene)	0.36	U	2.0	0.36	1	NA	9/10/09 12:21		169786	
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	1	NA	9/10/09 12:21		169786	
1,1,2-Trichloroethane	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	
1,1-Dichloroethane (1,1-DCA)	0.64	U	1.0	0.64	1	NA	9/10/09 12:21		169786	
1,1-Dichloroethene (1,1-DCE)	0.59	U	1.0	0.59	1	NA	9/10/09 12:21		169786	
1,1-Dichloropropene	0.39	U	2.0	0.39	1	NA	9/10/09 12:21		169786	
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	1	NA	9/10/09 12:21		169786	
1,2,3-Trichloropropane	0.64	U	2.0	0.64	1	NA	9/10/09 12:21		169786	
1,2,4-Trichlorobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:21		169786	
1,2,4-Trimethylbenzene	0.53	U	2.0	0.53	1	NA	9/10/09 12:21		169786	
1,2-Dibromo-3-chloropropane (DBCP)	0.61	U	5.0	0.61	1	NA	9/10/09 12:21		169786	
1,2-Dibromoethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:21		169786	
1,2-Dichloroethane	0.42	U	1.0	0.42	1	NA	9/10/09 12:21		169786	
1,2-Dichloropropane	0.36	U	1.0	0.36	1	NA	9/10/09 12:21		169786	
1,3,5-Trimethylbenzene	0.37	U	2.0	0.37	1	NA	9/10/09 12:21		169786	
1,3-Dichlorobenzene	0.84	U	2.0	0.84	1	NA	9/10/09 12:21		169786	
1,3-Dichloropropane	0.51	U	2.0	0.51	1	NA	9/10/09 12:21		169786	
1,4-Dichlorobenzene	0.44	U	2.0	0.44	1	NA	9/10/09 12:21		169786	
2,2-Dichloropropane	0.42	U	2.0	0.42	1	NA	9/10/09 12:21		169786	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	9/10/09 12:21		169786	
2-Chlorotoluene	0.48	U	5.0	0.48	1	NA	9/10/09 12:21		169786	
2-Hexanone	0.78	U	10	0.78	1	NA	9/10/09 12:21		169786	
2-Methyl-2-propanol	11	U	100	11	1	NA	9/10/09 12:21		169786	
4-Chlorotoluene	0.52	U	5.0	0.52	1	NA	9/10/09 12:21		169786	
4-Isopropyltoluene	0.42	U	2.0	0.42	1	NA	9/10/09 12:21		169786	
4-Methyl-2-pentanone	0.71	U	10	0.71	1	NA	9/10/09 12:21		169786	
Acetone	1.6	U	20	1.6	1	NA	9/10/09 12:21		169786	
Benzene	0.42	U	1.0	0.42	1	NA	9/10/09 12:21		169786	
Bromobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:21		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/27/09

Sample Name: Method Blank
Lab Code: RQ0907884-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromochloromethane	0.54	U	2.0	0.54	1	NA	9/10/09 12:21		169786	
Bromodichloromethane	0.84	U	1.0	0.84	1	NA	9/10/09 12:21		169786	
Bromoform	0.32	U	1.0	0.32	1	NA	9/10/09 12:21		169786	
Bromomethane	0.58	U	2.0	0.58	1	NA	9/10/09 12:21		169786	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	9/10/09 12:21		169786	
Chlorobenzene	0.44	U	1.0	0.44	1	NA	9/10/09 12:21		169786	
Chloroethane	0.36	U	2.0	0.36	1	NA	9/10/09 12:21		169786	
Chloroform	0.18	U	1.0	0.18	1	NA	9/10/09 12:21		169786	
Chloromethane	0.96	U	2.0	0.96	1	NA	9/10/09 12:21		169786	
Dibromochloromethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
Dibromomethane	0.54	U	1.0	0.54	1	NA	9/10/09 12:21		169786	
Dichlorodifluoromethane (CFC 12)	0.53	U	1.0	0.53	1	NA	9/10/09 12:21		169786	
Dichloromethane	0.50	U	2.0	0.50	1	NA	9/10/09 12:21		169786	
Diisopropyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:21		169786	
Ethyl tert-Butyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:21		169786	
Ethylbenzene	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
Hexachlorobutadiene	0.93	U	5.0	0.93	1	NA	9/10/09 12:21		169786	
Methyl tert-Butyl Ether	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	
Naphthalene	0.37	U	2.0	0.37	1	NA	9/10/09 12:21		169786	
Styrene	0.37	U	1.0	0.37	1	NA	9/10/09 12:21		169786	
Tetrachloroethene (PCE)	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
Toluene	0.42	U	1.0	0.42	1	NA	9/10/09 12:21		169786	
Trichloroethene (TCE)	0.63	U	1.0	0.63	1	NA	9/10/09 12:21		169786	
Trichlorofluoromethane (CFC 11)	0.48	U	1.0	0.48	1	NA	9/10/09 12:21		169786	
Vinyl Chloride	0.52	U	1.0	0.52	1	NA	9/10/09 12:21		169786	
cis-1,2-Dichloroethene	0.48	U	1.0	0.48	1	NA	9/10/09 12:21		169786	
cis-1,3-Dichloropropene	0.38	U	1.0	0.38	1	NA	9/10/09 12:21		169786	
m,p-Xylenes	0.85	U	1.0	0.85	1	NA	9/10/09 12:21		169786	
n-Butylbenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:21		169786	
n-Propylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:21		169786	
o-Xylene	0.56	U	1.0	0.56	1	NA	9/10/09 12:21		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/27/09

Sample Name: Method Blank
Lab Code: RQ0907884-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
sec-Butylbenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:21		169786	
tert-Amyl Methyl Ether	0.21	U	1.0	0.21	1	NA	9/10/09 12:21		169786	
tert-Butylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:21		169786	
trans-1,2-Dichloroethene	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	
trans-1,3-Dichloropropene	0.25	U	1.0	0.25	1	NA	9/10/09 12:21		169786	
1,1,1-Trichloroethane (TCA)	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	96	70-130	9/10/09 12:21		
Dibromofluoromethane	99	70-130	9/10/09 12:21		
Toluene-d8	105	70-130	9/10/09 12:21		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ0908463-01

Units: µg/L
Basis: NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.23	U	1.0	0.23	1	NA	9/10/09 11:46		169786	
Isopropylbenzene (Cumene)	0.36	U	2.0	0.36	1	NA	9/10/09 11:46		169786	
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	1	NA	9/10/09 11:46		169786	
1,1,2-Trichloroethane	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	
1,1-Dichloroethane (1,1-DCA)	0.64	U	1.0	0.64	1	NA	9/10/09 11:46		169786	
1,1-Dichloroethene (1,1-DCE)	0.59	U	1.0	0.59	1	NA	9/10/09 11:46		169786	
1,1-Dichloropropene	0.39	U	2.0	0.39	1	NA	9/10/09 11:46		169786	
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	1	NA	9/10/09 11:46		169786	
1,2,3-Trichloropropane	0.64	U	2.0	0.64	1	NA	9/10/09 11:46		169786	
1,2,4-Trichlorobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 11:46		169786	
1,2,4-Trimethylbenzene	0.53	U	2.0	0.53	1	NA	9/10/09 11:46		169786	
1,2-Dibromo-3-chloropropane (DBCP)	0.61	U	5.0	0.61	1	NA	9/10/09 11:46		169786	
1,2-Dibromoethane	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	9/10/09 11:46		169786	
1,2-Dichloroethane	0.42	U	1.0	0.42	1	NA	9/10/09 11:46		169786	
1,2-Dichloropropane	0.36	U	1.0	0.36	1	NA	9/10/09 11:46		169786	
1,3,5-Trimethylbenzene	0.37	U	2.0	0.37	1	NA	9/10/09 11:46		169786	
1,3-Dichlorobenzene	0.84	U	2.0	0.84	1	NA	9/10/09 11:46		169786	
1,3-Dichloropropane	0.51	U	2.0	0.51	1	NA	9/10/09 11:46		169786	
1,4-Dichlorobenzene	0.44	U	2.0	0.44	1	NA	9/10/09 11:46		169786	
2,2-Dichloropropane	0.42	U	2.0	0.42	1	NA	9/10/09 11:46		169786	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	9/10/09 11:46		169786	
2-Chlorotoluene	0.48	U	5.0	0.48	1	NA	9/10/09 11:46		169786	
2-Hexanone	0.78	U	10	0.78	1	NA	9/10/09 11:46		169786	
2-Methyl-2-propanol	11	U	100	11	1	NA	9/10/09 11:46		169786	
4-Chlorotoluene	0.52	U	5.0	0.52	1	NA	9/10/09 11:46		169786	
4-Isopropyltoluene	0.42	U	2.0	0.42	1	NA	9/10/09 11:46		169786	
4-Methyl-2-pentanone	0.71	U	10	0.71	1	NA	9/10/09 11:46		169786	
Acetone	1.6	U	20	1.6	1	NA	9/10/09 11:46		169786	
Benzene	0.42	U	1.0	0.42	1	NA	9/10/09 11:46		169786	
Bromobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 11:46		169786	
Bromochloromethane	0.54	U	2.0	0.54	1	NA	9/10/09 11:46		169786	
Bromodichloromethane	0.84	U	1.0	0.84	1	NA	9/10/09 11:46		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: RQ0908463-01

Service Request: R0904817
Date Collected: NA
Date Received: NA

Units: µg/L
Basis: NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.32	U	1.0	0.32	1	NA	9/10/09 11:46		169786	
Bromomethane	0.58	U	2.0	0.58	1	NA	9/10/09 11:46		169786	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	9/10/09 11:46		169786	
Chlorobenzene	0.44	U	1.0	0.44	1	NA	9/10/09 11:46		169786	
Chloroethane	0.36	U	2.0	0.36	1	NA	9/10/09 11:46		169786	
Chloroform	0.18	U	1.0	0.18	1	NA	9/10/09 11:46		169786	
Chloromethane	0.96	U	2.0	0.96	1	NA	9/10/09 11:46		169786	
Dibromochloromethane	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
Dibromomethane	0.54	U	1.0	0.54	1	NA	9/10/09 11:46		169786	
Dichlorodifluoromethane (CFC 12)	0.53	U	1.0	0.53	1	NA	9/10/09 11:46		169786	
Dichloromethane	0.50	U	2.0	0.50	1	NA	9/10/09 11:46		169786	
Diisopropyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 11:46		169786	
Ethyl tert-Butyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 11:46		169786	
Ethylbenzene	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
Hexachlorobutadiene	0.93	U	5.0	0.93	1	NA	9/10/09 11:46		169786	
Methyl tert-Butyl Ether	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	
Naphthalene	0.37	U	2.0	0.37	1	NA	9/10/09 11:46		169786	
Styrene	0.37	U	1.0	0.37	1	NA	9/10/09 11:46		169786	
Tetrachloroethene (PCE)	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
Toluene	0.42	U	1.0	0.42	1	NA	9/10/09 11:46		169786	
Trichloroethene (TCE)	0.63	U	1.0	0.63	1	NA	9/10/09 11:46		169786	
Trichlorofluoromethane (CFC 11)	0.48	U	1.0	0.48	1	NA	9/10/09 11:46		169786	
Vinyl Chloride	0.52	U	1.0	0.52	1	NA	9/10/09 11:46		169786	
cis-1,2-Dichloroethene	0.48	U	1.0	0.48	1	NA	9/10/09 11:46		169786	
cis-1,3-Dichloropropene	0.38	U	1.0	0.38	1	NA	9/10/09 11:46		169786	
m,p-Xylenes	0.85	U	1.0	0.85	1	NA	9/10/09 11:46		169786	
n-Butylbenzene	0.40	U	2.0	0.40	1	NA	9/10/09 11:46		169786	
n-Propylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 11:46		169786	
o-Xylene	0.56	U	1.0	0.56	1	NA	9/10/09 11:46		169786	
sec-Butylbenzene	0.46	U	2.0	0.46	1	NA	9/10/09 11:46		169786	
tert-Amyl Methyl Ether	0.21	U	1.0	0.21	1	NA	9/10/09 11:46		169786	
tert-Butylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 11:46		169786	
trans-1,2-Dichloroethene	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908463-01	**Basis:**	NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,3-Dichloropropene	0.25	U	1.0	0.25	1	NA	9/10/09 11:46		169786	
1,1,1-Trichloroethane (TCA)	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	96	70-130	9/10/09 11:46		
Dibromofluoromethane	102	70-130	9/10/09 11:46		
Toluene-d8	106	70-130	9/10/09 11:46		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/10/09

Lab Control Sample Summary
SPLP Volatile Organics

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 169786

Analyte Name	Lab Control Sample RQ0908463-02 Result	Expected	% Rec		% Rec Limits
1,1,1,2-Tetrachloroethane	**22.8**	20.0	114		70 - 125
Isopropylbenzene (Cumene)	**25.2**	20.0	126	*	70 - 125
1,1,2,2-Tetrachloroethane	**19.8**	20.0	99		70 - 125
1,1,2-Trichloroethane	**18.9**	20.0	95		70 - 125
1,1-Dichloroethane (1,1-DCA)	**22.7**	20.0	114		70 - 125
1,1-Dichloroethene (1,1-DCE)	**22.6**	20.0	113		70 - 125
1,1-Dichloropropene	**23.2**	20.0	116		70 - 125
1,2,3-Trichlorobenzene	**22.0**	20.0	110		70 - 125
1,2,3-Trichloropropane	**17.5**	20.0	88		70 - 125
1,2,4-Trichlorobenzene	**23.1**	20.0	115		70 - 125
1,2,4-Trimethylbenzene	**23.6**	20.0	118		70 - 125
1,2-Dibromo-3-chloropropane (DBCP)	**18.0**	20.0	90		70 - 125
1,2-Dibromoethane	**19.5**	20.0	97		70 - 125
1,2-Dichlorobenzene	**22.9**	20.0	114		70 - 125
1,2-Dichloroethane	**19.3**	20.0	97		70 - 125
1,2-Dichloropropane	**21.2**	20.0	106		70 - 125
1,3,5-Trimethylbenzene	**23.8**	20.0	119		70 - 125
1,3-Dichlorobenzene	**24.3**	20.0	121		70 - 125
1,3-Dichloropropane	**19.8**	20.0	99		70 - 125
1,4-Dichlorobenzene	**23.9**	20.0	120		70 - 125
2,2-Dichloropropane	**22.9**	20.0	114		70 - 125
2-Butanone (MEK)	**15.6**	20.0	78		50 - 125
2-Chlorotoluene	**22.9**	20.0	114		70 - 125
2-Hexanone	**15.6**	20.0	78		70 - 125
2-Methyl-2-propanol	**347**	400	87		70 - 125
4-Chlorotoluene	**23.7**	20.0	119		70 - 125
4-Isopropyltoluene	**25.4**	20.0	127	*	70 - 125
4-Methyl-2-pentanone	**16.6**	20.0	83		70 - 125
Acetone	**18.1**	20.0	90		50 - 125
Benzene	**22.7**	20.0	114		70 - 125
Bromobenzene	**22.4**	20.0	112		70 - 125
Bromochloromethane	**19.9**	20.0	99		70 - 125
Bromodichloromethane	**20.8**	20.0	104		70 - 125
Bromoform	**19.6**	20.0	98		70 - 125
Bromomethane	**24.1**	20.0	120		50 - 125
Carbon Tetrachloride	**23.8**	20.0	119		70 - 125

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/10/09

Lab Control Sample Summary
SPLP Volatile Organics

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 169786

Analyte Name	Lab Control Sample RQ0908463-02 Result	Expected	% Rec		% Rec Limits
Chlorobenzene	**23.1**	20.0	115		70 - 125
Chloroethane	**24.5**	20.0	122		70 - 125
Chloroform	**22.3**	20.0	112		70 - 125
Chloromethane	**23.3**	20.0	117		70 - 125
Dibromochloromethane	**20.8**	20.0	104		70 - 125
Dibromomethane	**17.3**	20.0	87		70 - 125
Dichlorodifluoromethane (CFC 12)	**20.6**	20.0	103		70 - 125
Dichloromethane	**21.6**	20.0	108		70 - 125
Ethylbenzene	**23.8**	20.0	119		70 - 125
Hexachlorobutadiene	**24.2**	20.0	121		70 - 125
Methyl tert-Butyl Ether	**17.6**	20.0	88		70 - 125
Naphthalene	**18.6**	20.0	93		70 - 125
Styrene	**23.8**	20.0	119		70 - 125
Tetrachloroethene (PCE)	**25.5**	20.0	128	*	70 - 125
Toluene	**23.0**	20.0	115		70 - 125
Trichloroethene (TCE)	**23.5**	20.0	117		70 - 125
Trichlorofluoromethane (CFC 11)	**26.0**	20.0	130	*	70 - 125
Vinyl Chloride	**24.7**	20.0	124		70 - 125
cis-1,2-Dichloroethene	**21.0**	20.0	105		70 - 125
cis-1,3-Dichloropropene	**19.5**	20.0	98		70 - 125
m,p-Xylenes	**48.0**	40.0	120		70 - 125
n-Butylbenzene	**24.5**	20.0	123		70 - 125
n-Propylbenzene	**24.1**	20.0	120		70 - 125
o-Xylene	**24.0**	20.0	120		70 - 125
sec-Butylbenzene	**25.6**	20.0	128	*	70 - 125
tert-Butylbenzene	**25.2**	20.0	126	*	70 - 125
trans-1,2-Dichloroethene	**21.6**	20.0	108		70 - 125
trans-1,3-Dichloropropene	**18.4**	20.0	92		70 - 125
1,1,1-Trichloroethane (TCA)	**23.0**	20.0	115		70 - 125

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 15:39	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 15:39	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 15:39	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 15:39	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 15:39	95122	169951	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/10/09 15:39	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 15:39	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 15:39	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 15:39	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 15:39	95122	169951	
Diethyl Phthalate	**0.29**	J	5.0	0.20	1	9/ 2/09	9/10/09 15:39	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 15:39	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 15:39	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 15:39	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 15:39	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 15:39	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 15:39	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 15:39	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 15:39	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 15:39	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 15:39	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 15:39	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 15:39	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
		Pre-Prep Date:	8/31/09
Sample Name:	SA64-10BSPLP2	**Units:**	µg/L
Lab Code:	R0904817-001	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	86	45-135	9/10/09 15:39		
Nitrobenzene-d5	88	45-135	9/10/09 15:39		
p-Terphenyl-d14	87	45-135	9/10/09 15:39		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001
Run Type: Reanalysis

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 14:18	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 14:18	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 14:18	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:18	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 14:18	95122	169951	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/10/09 14:18	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:18	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 14:18	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 14:18	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:18	95122	169951	
Diethyl Phthalate	**0.27**	J	5.0	0.20	1	9/ 2/09	9/10/09 14:18	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 14:18	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 14:18	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 14:18	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 14:18	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 14:18	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 14:18	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:18	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 14:18	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:18	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 14:18	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 14:18	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 14:18	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
Sample Name:	SA64-10BSPLP2	**Units:**	µg/L
Lab Code:	R0904817-001	**Basis:**	NA
Run Type:	Reanalysis		

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	86	45-135	9/10/09 14:18		
Nitrobenzene-d5	93	45-135	9/10/09 14:18		
p-Terphenyl-d14	95	45-135	9/10/09 14:18		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 16:20	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 16:20	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 16:20	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 16:20	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 16:20	95122	169951	
Butyl Benzyl Phthalate	**0.11**	BJ	5.0	0.11	1	9/ 2/09	9/10/09 16:20	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 16:20	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 16:20	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 16:20	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 16:20	95122	169951	
Diethyl Phthalate	**1.3**	J	5.0	0.20	1	9/ 2/09	9/10/09 16:20	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 16:20	95122	169951	
Fluoranthene	**0.057**	J	0.20	0.040	1	9/ 2/09	9/10/09 16:20	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 16:20	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 16:20	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 16:20	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 16:20	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 16:20	95122	169951	
Phenanthrene	**0.075**	J	0.20	0.062	1	9/ 2/09	9/10/09 16:20	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 16:20	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 16:20	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 16:20	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 16:20	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
		Pre-Prep Date:	8/31/09
Sample Name:	SA64-10BSPLP3	**Units:**	µg/L
Lab Code:	R0904817-002	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec		Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	449	*	45-135	9/10/09 16:20		
Nitrobenzene-d5	91		45-135	9/10/09 16:20		
p-Terphenyl-d14	91		45-135	9/10/09 16:20		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002
Run Type: Reanalysis

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 14:59	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 14:59	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 14:59	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:59	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 14:59	95122	169951	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/10/09 14:59	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:59	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 14:59	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 14:59	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:59	95122	169951	
Diethyl Phthalate	**0.54**	J	5.0	0.20	1	9/ 2/09	9/10/09 14:59	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 14:59	95122	169951	
Fluoranthene	**0.075**	J	0.20	0.040	1	9/ 2/09	9/10/09 14:59	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 14:59	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 14:59	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 14:59	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 14:59	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:59	95122	169951	
Phenanthrene	**0.066**	J	0.20	0.062	1	9/ 2/09	9/10/09 14:59	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:59	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 14:59	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 14:59	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 14:59	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
Sample Name:	SA64-10BSPLP3	**Units:**	µg/L
Lab Code:	R0904817-002	**Basis:**	NA
Run Type:	Reanalysis		

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec		Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	184	*	45-135	9/10/09 14:59		
Nitrobenzene-d5	87		45-135	9/10/09 14:59		
p-Terphenyl-d14	88		45-135	9/10/09 14:59		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ0908092-01

Units: µg/L
Basis: NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/9/09 21:10	95122	169753	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/9/09 21:10	95122	169753	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/9/09 21:10	95122	169753	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/9/09 21:10	95122	169753	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/9/09 21:10	95122	169753	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/9/09 21:10	95122	169753	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/9/09 21:10	95122	169753	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/9/09 21:10	95122	169753	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/9/09 21:10	95122	169753	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/9/09 21:10	95122	169753	
Diethyl Phthalate	0.20	U	5.0	0.20	1	9/ 2/09	9/9/09 21:10	95122	169753	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/9/09 21:10	95122	169753	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/9/09 21:10	95122	169753	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/9/09 21:10	95122	169753	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/9/09 21:10	95122	169753	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/9/09 21:10	95122	169753	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/9/09 21:10	95122	169753	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/9/09 21:10	95122	169753	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/9/09 21:10	95122	169753	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/9/09 21:10	95122	169753	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/9/09 21:10	95122	169753	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/9/09 21:10	95122	169753	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/9/09 21:10	95122	169753	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908092-01	**Basis:**	NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	81	45-135	9/9/09 21:10		
Nitrobenzene-d5	80	45-135	9/9/09 21:10		
p-Terphenyl-d14	84	45-135	9/9/09 21:10		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908042-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 17:01	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 17:01	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 17:01	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:01	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 17:01	95122	169951	
Butyl Benzyl Phthalate	**0.19**	J	5.0	0.11	1	9/ 2/09	9/10/09 17:01	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:01	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 17:01	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 17:01	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:01	95122	169951	
Diethyl Phthalate	0.20	U	5.0	0.20	1	9/ 2/09	9/10/09 17:01	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 17:01	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 17:01	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 17:01	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 17:01	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 17:01	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 17:01	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:01	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 17:01	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:01	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 17:01	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 17:01	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 17:01	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Pre-Prep Date:	8/31/09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908042-01	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	89	45-135	9/10/09 17:01		
Nitrobenzene-d5	96	45-135	9/10/09 17:01		
p-Terphenyl-d14	95	45-135	9/10/09 17:01		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908043-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 17:43	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 17:43	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 17:43	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:43	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 17:43	95122	169951	
Butyl Benzyl Phthalate	**0.13**	J	5.0	0.11	1	9/ 2/09	9/10/09 17:43	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:43	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 17:43	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 17:43	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:43	95122	169951	
Diethyl Phthalate	0.20	U	5.0	0.20	1	9/ 2/09	9/10/09 17:43	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 17:43	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 17:43	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 17:43	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 17:43	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 17:43	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 17:43	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:43	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 17:43	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:43	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 17:43	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 17:43	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 17:43	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Pre-Prep Date:	8/31/09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908043-01	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	84	45-135	9/10/09 17:43		
Nitrobenzene-d5	81	45-135	9/10/09 17:43		
p-Terphenyl-d14	91	45-135	9/10/09 17:43		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/ 9/09 - 9/10/09

Lab Control Sample Summary
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 95122

Analyte Name	Lab Control Sample RQ0908092-02 Result	Expected	% Rec		Duplicate Lab Control Sample RQ0908092-03 Result	Expected	% Rec		% Rec Limits	RPD		RPD Limit
2-Methylnaphthalene	**3.65**	4.00	91		**3.80**	4.00	95		50 - 120	4		30
Acenaphthene	**3.35**	4.00	84		**3.78**	4.00	95		50 - 120	12		30
Acenaphthylene	**3.43**	4.00	86		**3.80**	4.00	95		50 - 120	10		30
Anthracene	**3.63**	4.00	91		**3.70**	4.00	93		50 - 120	2		30
Benz(a)anthracene	**3.92**	4.00	98		**3.75**	4.00	94		50 - 120	4		30
Benzo(a)pyrene	**3.29**	4.00	82		**3.30**	4.00	83		50 - 120	0		30
Benzo(b)fluoranthene	**3.70**	4.00	93		**3.98**	4.00	100		50 - 120	7		30
Benzo(g,h,i)perylene	**3.30**	4.00	83		**4.22**	4.00	106		50 - 120	24		30
Benzo(k)fluoranthene	**3.73**	4.00	93		**3.68**	4.00	92		50 - 120	1		30
Bis(2-ethylhexyl) Phthalate	**4.10**	4.00	103		**3.81**	4.00	95		50 - 120	7		30
Butyl Benzyl Phthalate	**3.61**	4.00	90		**3.26**	4.00	82		50 - 120	10		30
Chrysene	**3.73**	4.00	93		**3.63**	4.00	91		50 - 120	3		30
Di-n-butyl Phthalate	**3.94**	4.00	99		**3.83**	4.00	96		50 - 120	3		30
Di-n-octyl Phthalate	**3.39**	4.00	85		**3.31**	4.00	83		50 - 120	2		30
Dibenz(a,h)anthracene	**3.57**	4.00	89		**3.94**	4.00	99		50 - 120	10		30
Diethyl Phthalate	**3.44**	4.00	86		**4.02**	4.00	101		50 - 120	16		30
Dimethyl Phthalate	**3.19**	4.00	80		**3.72**	4.00	93		50 - 120	15		30
Fluoranthene	**3.90**	4.00	98		**4.07**	4.00	102		50 - 120	4		30
Fluorene	**3.58**	4.00	90		**4.26**	4.00	107		50 - 120	17		30
Hexachlorobenzene	**3.93**	4.00	98		**3.81**	4.00	95		50 - 120	3		30
Indeno(1,2,3-cd)pyrene	**3.48**	4.00	87		**3.97**	4.00	99		50 - 120	13		30
Naphthalene	**3.30**	4.00	83		**3.44**	4.00	86		50 - 120	4		30
Nitrobenzene	**3.57**	4.00	89		**3.89**	4.00	97		50 - 120	9		30
Phenanthrene	**3.58**	4.00	90		**3.70**	4.00	93		50 - 120	3		30
Pyrene	**3.67**	4.00	92		**3.54**	4.00	89		50 - 120	4		30
Pyridine	**0.750**	4.00	19	*	**0.420**	4.00	11	*	50 - 120	56	*	30
1,4-Dioxane	**2.45**	5.00	49	*	**2.28**	5.00	46	*	50 - 120	7		30
Octachlorostyrene	**3.01**	4.00	75		**3.11**	4.00	78		50 - 120	3		30

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	94	75	1	9/ 2/09	9/14/09 14:29	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 14:29	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	85	51-117	9/14/09 14:29		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
		Pre-Prep Date:	8/31/09
Sample Name:	SA64-10BSPLP3	**Units:**	µg/L
Lab Code:	R0904817-002	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	**78**	J	94	75	1	9/ 2/09	9/14/09 15:20	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 15:20	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	84	51-117	9/14/09 15:20		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908042-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	94	75	1	9/ 2/09	9/14/09 16:11	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 16:11	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	71	51-117	9/14/09 16:11		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908043-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	94	75	1	9/ 2/09	9/14/09 17:02	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 17:02	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	76	51-117	9/14/09 17:02		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908132-01	**Basis:**	NA

SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	100	75	1	9/ 2/09	9/14/09 10:13	95174	170335	
C28 - C40 ORO	75	U	100	75	1	9/ 2/09	9/14/09 10:13	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	65	51-117	9/14/09 10:13		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/14/09

Lab Control Sample Summary
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 95174

Analyte Name	Lab Control Sample RQ0908132-02 Result	Expected	% Rec	Duplicate Lab Control Sample RQ0908132-03 Result	Expected	% Rec	% Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	**314**	501	63	**397**	501	79	10 - 154	23	30

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**80.1**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.081**		mg/L	0.050	0.007	1	NA	9/4/09 13:23
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**16.5**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 15:56
Carbon, Total Organic	9060	**0.4**	BJ	mg/L	1.0	0.1	1	NA	9/15/09 17:40
Carbonate Alkalinity as CaCO3	SM 2320 B	**63.6**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**4.59**		mg/L	0.20	0.05	1	NA	9/1/09 15:56
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 13:51
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 14:01
Conductivity	120.1	**420**		µMHOS/cm	0.050		1	NA	9/1/09 18:05
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**1.15**	B	mg/L	0.050	0.004	1	NA	9/1/09 15:56
Nitrite as Nitrogen	353.2M	**4.60**		mg/L	0.050	0.035	5	NA	9/1/09 15:15
pH	9040B Modified	**9.88**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.078**	B	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:40
Solids, Total Dissolved (TDS)	SM 2540 C	**207**		mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	**1.1**		mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	**12.7**		mg/L	0.40	0.09	2	NA	9/1/09 21:05
Surfactants	SM 5540 C	**0.017**	J	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
		Pre-Prep Date:	8/31/09
Sample Name:	SA64-10BSPLP3		
Lab Code:	R0904817-002	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**80.4**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.084**		mg/L	0.050	0.007	1	NA	9/4/09 13:27
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**16.8**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 17:01
Carbon, Total Organic	9060	**0.5**	BJ	mg/L	1.0	0.1	1	NA	9/15/09 18:14
Carbonate Alkalinity as CaCO3	SM 2320 B	**63.6**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**4.46**		mg/L	0.20	0.05	1	NA	9/1/09 17:01
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 15:56
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 16:06
Conductivity	120.1	**389**		µMHOS/cm	0.050		1	NA	9/1/09 18:05
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**1.05**		mg/L	0.050	0.004	1	NA	9/1/09 17:01
Nitrite as Nitrogen	353.2M	**4.41**		mg/L	0.050	0.035	5	NA	9/1/09 15:18
pH	9040B Modified	**9.93**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.046**	BJ	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:42
Solids, Total Dissolved (TDS)	SM 2540 C	**202**		mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	**13.2**		mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	**12.5**		mg/L	0.40	0.09	2	NA	9/1/09 21:54
Surfactants	SM 5540 C	**0.011**	J	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: R0904817-MB1

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.007**	J	mg/L	0.050	0.007	1	NA	9/4/09 13:22
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 20:00
Carbon, Total Organic	9060	**0.2**	J	mg/L	1.0	0.1	1	NA	9/15/09 16:31
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**0.16**	J	mg/L	0.20	0.05	1	NA	9/1/09 20:00
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 13:30
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 13:40
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**0.146**		mg/L	0.050	0.004	1	NA	9/1/09 20:00
Nitrite as Nitrogen	353.2M	0.007	U	mg/L	0.010	0.007	1	NA	9/1/09 15:15
pH	9040B Modified	**4.98**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.012**	J	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:40
Solids, Total Dissolved (TDS)	SM 2540 C	6	U	mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	1.0	U	mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	**0.86**		mg/L	0.20	0.05	1	NA	9/1/09 20:00
Surfactants	SM 5540 C	0.005	U	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: R0904817-MB2

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.007**	J	mg/L	0.050	0.007	1	NA	9/4/09 13:26
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 16:44
Carbon, Total Organic	9060	**0.2**	J	mg/L	1.0	0.1	1	NA	9/15/09 17:05
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**0.16**	J	mg/L	0.20	0.05	1	NA	9/1/09 16:44
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 14:53
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 15:04
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**0.089**		mg/L	0.050	0.004	1	NA	9/1/09 16:44
Nitrite as Nitrogen	353.2M	0.007	U	mg/L	0.010	0.007	1	NA	9/1/09 15:18
pH	9040B Modified	**6.82**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.011**	J	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:41
Solids, Total Dissolved (TDS)	SM 2540 C	6	U	mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	1.0	U	mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	0.05	U	mg/L	0.20	0.05	1	NA	9/1/09 16:44
Surfactants	SM 5540 C	0.005	U	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

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Page

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/ 1/09 - 9/15/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0904817-LCS1 Result	Expected	% Rec	% Rec Limits
Alkalinity, Total as CaCO3	SM 2320 B	**18.8**	20.0	94	90 - 108
Ammonia as Nitrogen	350.1M	**0.502**	0.500	100	90 - 110
Bromide	9056	**1.01**	1.00	101	90 - 110
Carbon, Total Organic	9060	**9.20**	10.0	92	86 - 117
Chloride	9056	**1.80**	2.00	90	90 - 110
Chromium, Hexavalent	7199	**0.189**	0.200	94	92 - 110
Chromium, Hexavalent	7199	**0.196**	0.200	98	92 - 110
Cyanide, Total	9012A	**0.0900**	0.100	90	85 - 115
Nitrite as Nitrogen	353.2M	**0.240**	0.250	96	90 - 110
Phosphorus	365.1 Modified	**0.797**	0.800	100	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C	**879**	913	96	80 - 120
Solids, Total Suspended (TSS)	SM 2540 D	**216**	214	101	80 - 120
Sulfate	9056 Modified	**2.03**	2.00	101	90 - 110
Surfactants	SM 5540 C	**0.0198**	0.020	99	64 - 142
Nitrate as Nitrogen	9056 Modified	**0.978**	1.00	98	90 - 110

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/ 1/09 - 9/15/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0904817-LCS2 Result	Expected	% Rec		% Rec Limits
Carbon, Total Organic	9060	**9.20**	10.0	92		86 - 117
Chromium, Hexavalent	7199	**0.183**	0.200	91	*	92 - 110
Chromium, Hexavalent	7199	**0.189**	0.200	95		92 - 110
Cyanide, Total	9012A	**0.369**	0.400	92		85 - 115
Surfactants	SM 5540 C	**0.330**	0.350	94		64 - 142

Comments:

October 5, 2009

Mr. Frank Hagar
Northgate Environmental
1100 Quail Street
Suite 102
Newport Beach, CA 92660

Re: Tronox LLC Henderson #2027.001
Service Request #R0904817

Dear Mr. Hagar:

Enclosed is the analytical data report for the above referenced facility. A total of one sample was received by our laboratory on August 25, 2009.

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,
COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

cc: Ms. Cindy Arnold
Northgate Environmental
2501 Geigel Avenue
Orlando, FL 32806

This report contains a total of 758 pages.

SDG NARRATIVE

CASE NARRATIVE

COMPANY: Northgate Environmental
Tronox LLC Henderson Project #2027.001
SERVICE REQUEST #: R0904817

Northgate sample was collected on 08/24/09 and received at CAS on 08/25/09 in good condition. Columbia Analytical Services' (CAS) reporting limit has been expressed as the Method Reporting Limit (MRL) rather than the Practical Quantitation Limit (PQL). At the client's request, all results have been reported to the Method Detection Limit (MDL) where an MDL is performed on that parameter. The MDL for SPLP parameters is the aqueous MDL.

INORGANICS

One soil sample was extracted by SPLP fluid #2 and SPLP #3 and were analyzed for a site specific list of inorganics. Please see attached data pages for method numbers. The LCS' for these samples were spiked at the bench rather than prior to the SPLP extraction at the client's request.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits except the replicate LCS for Hexavalent Chromium and has been flagged with an "*" The sample could not be repeated within holding time so the data was accepted.

The Laboratory blanks associated with these analyses were free of contamination except the SPLP blanks had low level hits for Alkalinity, Bicarbonate alkalinity, Nitrate, TOC, Chloride, Phosphorus, Ammonia and Sulfate. All affected data has been flagged with a "B".

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

One soil sample was extracted by SPLP fluid #3 and analyzed for a site specific list of Volatiles by Method 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within Tronox limits except Isopropylbenzene, 4-Isopropyltoluene, Tetrachloroethene, Trichlorofluoromethane, sec-Butylbenzene and ter-Butylbenzene were outside limits on the 09/10/09 LCS. All LCS outliers were within 60-140%. All outlying QC has been flagged with an "*".

The Laboratory blanks associated with these samples were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

SEMIVOLATILE ORGANICS

One soil sample was extracted by SPLP fluid #2 and SPLP fluid #3 and analyzed for a site specific list of Semivolatiles by method 8270C low level from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except SA64-10BSPLP2 and SA64-10BSPLP3. The samples were repeated and again the internal standards were outside limits. Both sets of data have been reported and all outlying internal standards have been flagged with an "*".

All surrogate standard recoveries were within Tronox limits except SA64-10BSPLP3. The sample was repeated an again the surrogates. Both sets of data have been reported out and all outlying internal standards have been flagged with an "*". Please note: the outlying internal standard probably caused a high bias on the surrogate.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within Tronox limits except Pyridine and 1,4-Dioxane. All QC outliers were within 10-150%. All RPD's were within limits except Pyridine on the 09/02/09 LCS/LCSD. All outlying QC has been flagged with a "*".

The Laboratory Blanks associated with these analyses were free of contamination except the 09/02/09 blanks had a low level hit for Butyl benzyl phthalate. All affected data has been flagged with a "B".

All samples were extracted and analyzed within holding times.

No other analytical or QC problems were encountered.

DIESEL RANGE AND OIL RANGE ORGANICS

One soil sample was extracted by SPLP fluid #2 and SPLP fluid #3 and analyzed for Diesel and Oil Range Organics by method 8015B from SW-846.

All initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries and RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package have by authorized by the Laboratory Manager or his designee, as verified by the following signature.

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 2027.001
Submission: R0904817
Client: Northgate Environmental
Client Rep: JJAEGER
Project: Tronox LLC Henderson

Batch Complete: Yes
Diskette Requested: Yes
Date: 9/2/09
Custody Seal: Present/Absent:
Chain of Custody: Present/Absent:

Date Revised:
Date Due: 9/15/09
Protocol: SW846
Shipping No.:
SDG #: SA64-10BSPLP2

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R0904817-001	SA64-10BSPLP2	Soil	EPA 1312, 120.1, 8270C, 8015B, SM 2320 B, 9056, 9056 Modified, 365.1 Modified, SM 5540 C, SM 2540 D, 353.2M, 9060, 9040B Modified, SM 2540 C, 9012A, 350.1M, 7199	8/24/09	8/25/09			
R0904817-002	SA64-10BSPLP3	Soil	EPA 1312, 120.1, 8260B, 8270C, 8015B, 7199, SM 2320 B, 350.1M, 9056, 9012A, 9056 Modified, 365.1 Modified, SM 2540 C, SM 5540 C, 9040B Modified, 9060, 353.2M, SM 2540 D	8/24/09	8/25/09			

Folder Comments:

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

CHAINS OF CUSTODY

INTERNAL CHAINS

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.0623
Page: 2 of 2
Cooler # 1 of 5

Collection Area: II

Required Ship to Lab:

Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.
Address:	1 Mustard Street, Suite 250
	Rochester, NY 14609
Lab PM:	Janice Jaeger
Phone/Fax:	(585)288-5380
Lab PM email	jjaeger@caslab.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City	Henderson
State	NV
Site PM Name	Derrick Willis
Phone/Fax:	(949) 375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send Invoice to:	Susan Crowley Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949) 260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush		Mark One	
If Rush, Date due					
QC level Required: Standard		Special	EPA Stage 4	Mark one	
NJ Reduced Deliverable Package?					
MA MCP Cert?		CT RCP Cert?		Mark One	

Lab Project ID (lab use)

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER WW; FREE PRODUCT LP; SOIL SO; OIL OL; WIPE SW; AMBIENT AIR AA; SOIL GAS GS; WATER W; SURFACE WATER WS; WATER QC WQ; SLUDGE SL; RINSATE RH; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 1312/8260B VOC	EPA1312/OrgWet Chm	EPA1312/8012A Cyanide	EPA 1312/7199	EPA1312/8015B DRO/G	EPA 1312/CASK LIST	SW 8460/8260B VOCs	Comments/Lab Sample I.D.
1	SA64-10BSPLP	SO	G	8/24/2009	8:34	1	N	X								X							2 oz Teflon lined glass
2	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X									X						2 x 8 oz glass jars
3	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X										X					2 x 8 oz glass jars
4	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X											X	X			2 x 8 oz glass jars
5	SA64-10BSPLP	SO	G	8/24/2009	8:34	2	N	X													X		2 x 8 oz glass jars
6																							
7																							
8	PF 8-24-09																						
9																							
10																							
11																							
12																							

Additional Comments/Special Instructions:

All samples on this page are SPLPs and require two leachates: pH adjusted water and pore water.

Organics/WetChem includes: EPA 8270C, SM 2320B, EPA 350.1, EPA 365.1, EPA 9045C, EPA 9056, SM5540C (Mod), Lloyd Kahn (TOC), EPA 160.3M (%solids), EPA 353.2 (Nitrite), EPA 300.1 (Chlorate), and EPA 9012A.

CASK List includes: EPA 314.0, EPA 6020, EPA 7471A

All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs. Notifications provided to:
cindy.arnold@ngem.com and frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Patrick Ferringer GES	8-24	1700	Matt Carr / CAS	8/25/09	1100

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N

SHIPPING METHOD: (mark as appropriate)	SAMPLER NAME AND SIGNATURE				
UPS COURIER FEDEX	PRINT Name of SAMPLER:	Patrick Ferringer			
US MAIL	SIGNATURE of SAMPLER:	Patrick Ferringer	DATE Signed	8-24	Time: 1440

Temp in 0C	Samples on Ice?	Sample Intact?	Trip Blank?

R0904817
Northgate Environmental
Tronox LLC Henderson

Cooler Receipt And Preservation Check Form

Project/Client Henderson Soil Submission Number RCI-4017.

Cooler received on 8/25/09 by: MWC **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant* air bubbles?	YES	(NO)	N/A		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(CAS/ROC, CLIENT)				
7.	Temperature of cooler(s) upon receipt:	3°	4°			
	Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 8/25/09 1015

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: MWC 8/27/09 8/25/09

Cooler Breakdown: Date : 8/25/09 by: MWC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO

4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 04/309-10

Other Comments:

PC Secondary Review: MWC 9/2/09 *significant air bubbles are greater than 5-6 mm

Cooler Receipt And Preservation Check Form

Project/Client Henderson sc: 1 Submission Number R09-4817.

Cooler received on 8/25/09 by: MWC **COURIER:** CAS UPS FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	NO	
2.	Were custody papers properly filled out (ink, signed, etc.)?	YES	NO	
3.	Did all bottles arrive in good condition (unbroken)?	YES	NO	
4.	Did any VOA vials have significant* air bubbles?	YES	NO	N/A
5.	Were **Ice** or **Ice packs** present?	YES	NO	
6.	Where did the bottles originate?	CAS/ROC, CLIENT		

7. Temperature of cooler(s) upon receipt:	3°	4°	3	F	5°	6°
Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes	Yes
If No, Explain Below	No	No	No	No	No	

Date/Time Temperatures Taken: 8/25/09 1015

Thermometer ID: 161 / IR GUN#2 / IR GUN#3 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: JMM 8/25/09

Cooler Breakdown: Date: 8/25/09 by: MWC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	YES	NO	
2.	Did all bottle labels and tags agree with custody papers?	YES	NO	
3.	Were correct containers used for the tests indicated?	YES	NO	
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated			N/A

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 041309-10

Other Comments:

PC Secondary Review: JMM 9/2/09 *significant air bubbles are greater than 5-6 mm

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0904817

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
R0904817-001.01					
	7199				
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
		9/2/09	1554	R-Dumpster / RJONES	
R0904817-001.02					
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
R0904817-001.03					
	EPA 1312				
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
R0904817-001.04					
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
R0904817-001.05					
	353.2M, 9056, 9056 Modified, SM 2540 C				
		9/1/09	0929	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/4/09	1009	In Lab / EWOLFE	
		9/4/09	1726	R-002 / EWOLFE	
R0904817-001.06					
	8015B				
		9/1/09	0936	In Lab / DBOND	
		9/1/09	1250	R-003 / DBOND	
		9/2/09	1318	In Lab / DMURPHY	
R0904817-001.07					
	8270C				
		9/1/09	0936	In Lab / DBOND	
		9/1/09	1250	R-003 / DBOND	
		9/2/09	0747	In Lab / DMURPHY	
R0904817-001.08					
	SM 2540 D				
		9/1/09	0936	In Lab / DBOND	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0904817

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		9/1/09	1304	R-002 / MCARRERA	
		9/4/09	1414	In Lab / EWOLFE	
		9/4/09	1725	R-Dumpster / EWOLFE	
R0904817-001.09					
	9040B Modified, SM 5540 C				
		9/1/09	0937	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/2/09	0900	In Lab / DWARD	
		9/2/09	1451	R-Dumpster / DWARD	
R0904817-001.10					
	SM 2320 B				
		9/1/09	0937	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/11/09	0929	In Lab / BBOWE	
		9/11/09	1629	R-002 / BBOWE	
R0904817-001.11					
	9012A				
		9/1/09	0938	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/3/09	0830	In Lab / HLOVEJOY	
		9/3/09	1311	R-002 / HLOVEJOY	
R0904817-001.12					
	350.1M, 365.1 Modified				
		9/1/09	0939	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/4/09	0740	In Lab / NMEAD	
		9/4/09	1441	R-002 / NMEAD	
		9/8/09	0821	In Lab / SROBINSON	
		9/8/09	1638	R-002 / SROBINSON	
R0904817-001.13					
	120.1				
		9/1/09	0940	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
R0904817-001.14					
	9060				
		9/1/09	0940	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/15/09	1140	In Lab / CSCHRADER	
		9/17/09	0850	R-Dumpster / CSCHRADER	
R0904817-001.15					
		9/1/09	0940	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0904817

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
R0904817-001.16					
		9/1/09	0940	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
R0904817-002.01					
	7199				
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
R0904817-002.02					
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
		9/2/09	1554	R-Dumpster / RJONES	
R0904817-002.03					
	EPA 1312				
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1828	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1328	R-003 / DBOND	
R0904817-002.04					
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1829	R-003 / MPETERS	
		8/31/09	1137	In Lab / DBOND	
		8/31/09	1329	R-003 / DBOND	
R0904817-002.05					
	EPA 1312				
		8/25/09	1819	SMO / MPETERS	
		8/25/09	1829	R-003 / MPETERS	
		8/27/09	1018	In Lab / DBOND	
		8/27/09	1248	R-003 / DBOND	
R0904817-002.06					
	8260B				
		8/28/09	0849	In Lab / DBOND	
		8/28/09	1046	R-002 / DBOND	
		9/10/09	1251	In Lab / DZIMPFER	
		9/10/09	1255	R-001-S08 / DZIMPFER	
R0904817-002.07					
		8/28/09	0849	In Lab / DBOND	
		8/28/09	1046	R-002 / DBOND	
R0904817-002.08					

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0904817

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		8/28/09	0849	In Lab / DBOND	
		8/28/09	1046	R-002 / DBOND	
R0904817-002.09					
	353.2M, 9056, 9056 Modified, SM 2540 C				
		9/1/09	0931	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/4/09	1009	In Lab / EWOLFE	
		9/4/09	1726	R-002 / EWOLFE	
R0904817-002.10					
	8015B				
		9/1/09	0941	In Lab / DBOND	
		9/1/09	1250	R-003 / DBOND	
		9/2/09	1318	In Lab / DMURPHY	
R0904817-002.11					
	8270C				
		9/1/09	0941	In Lab / DBOND	
		9/1/09	1250	R-003 / DBOND	
		9/2/09	0747	In Lab / DMURPHY	
R0904817-002.12					
	SM 2540 D				
		9/1/09	0942	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/4/09	1414	In Lab / EWOLFE	
		9/4/09	1726	R-002 / EWOLFE	
R0904817-002.13					
	9040B Modified, SM 5540 C				
		9/1/09	0942	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/2/09	0900	In Lab / DWARD	
		9/2/09	1451	R-Dumpster / DWARD	
R0904817-002.14					
	SM 2320 B				
		9/1/09	0942	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/11/09	0929	In Lab / BBOWE	
		9/11/09	1629	R-002 / BBOWE	
R0904817-002.15					
	350.1M, 365.1 Modified				
		9/1/09	0943	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/4/09	0740	In Lab / NMEAD	
		9/4/09	1441	R-002 / NMEAD	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0904817

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		9/8/09	0821	In Lab / SROBINSON	
		9/8/09	1638	R-002 / SROBINSON	
R0904817-002.16					
	9012A				
		9/1/09	0943	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/3/09	0830	In Lab / HLOVEJOY	
		9/3/09	1311	R-002 / HLOVEJOY	
R0904817-002.17					
	120.1				
		9/1/09	0944	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
R0904817-002.18					
	9060				
		9/1/09	0944	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
		9/15/09	1140	In Lab / CSCHRADER	
		9/17/09	0850	R-Dumpster / CSCHRADER	
R0904817-002.19					
		9/1/09	0944	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	
R0904817-002.20					
		9/1/09	0944	In Lab / DBOND	
		9/1/09	1304	R-002 / MCARRERA	

VOLATILE ORGANICS

QC SUMMARY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/10/09

Lab Control Sample Summary
SPLP Volatile Organics

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 169786

Analyte Name	Lab Control Sample RQ0908463-02 Result	Expected	% Rec		% Rec Limits
1,1,1,2-Tetrachloroethane	**22.8**	20.0	114		70 - 125
Isopropylbenzene (Cumene)	**25.2**	20.0	126	*	70 - 125
1,1,2,2-Tetrachloroethane	**19.8**	20.0	99		70 - 125
1,1,2-Trichloroethane	**18.9**	20.0	95		70 - 125
1,1-Dichloroethane (1,1-DCA)	**22.7**	20.0	114		70 - 125
1,1-Dichloroethene (1,1-DCE)	**22.6**	20.0	113		70 - 125
1,1-Dichloropropene	**23.2**	20.0	116		70 - 125
1,2,3-Trichlorobenzene	**22.0**	20.0	110		70 - 125
1,2,3-Trichloropropane	**17.5**	20.0	88		70 - 125
1,2,4-Trichlorobenzene	**23.1**	20.0	115		70 - 125
1,2,4-Trimethylbenzene	**23.6**	20.0	118		70 - 125
1,2-Dibromo-3-chloropropane (DBCP)	**18.0**	20.0	90		70 - 125
1,2-Dibromoethane	**19.5**	20.0	97		70 - 125
1,2-Dichlorobenzene	**22.9**	20.0	114		70 - 125
1,2-Dichloroethane	**19.3**	20.0	97		70 - 125
1,2-Dichloropropane	**21.2**	20.0	106		70 - 125
1,3,5-Trimethylbenzene	**23.8**	20.0	119		70 - 125
1,3-Dichlorobenzene	**24.3**	20.0	121		70 - 125
1,3-Dichloropropane	**19.8**	20.0	99		70 - 125
1,4-Dichlorobenzene	**23.9**	20.0	120		70 - 125
2,2-Dichloropropane	**22.9**	20.0	114		70 - 125
2-Butanone (MEK)	**15.6**	20.0	78		50 - 125
2-Chlorotoluene	**22.9**	20.0	114		70 - 125
2-Hexanone	**15.6**	20.0	78		70 - 125
2-Methyl-2-propanol	**347**	400	87		70 - 125
4-Chlorotoluene	**23.7**	20.0	119		70 - 125
4-Isopropyltoluene	**25.4**	20.0	127	*	70 - 125
4-Methyl-2-pentanone	**16.6**	20.0	83		70 - 125
Acetone	**18.1**	20.0	90		50 - 125
Benzene	**22.7**	20.0	114		70 - 125
Bromobenzene	**22.4**	20.0	112		70 - 125
Bromochloromethane	**19.9**	20.0	99		70 - 125
Bromodichloromethane	**20.8**	20.0	104		70 - 125
Bromoform	**19.6**	20.0	98		70 - 125
Bromomethane	**24.1**	20.0	120		50 - 125
Carbon Tetrachloride	**23.8**	20.0	119		70 - 125

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/10/09

Lab Control Sample Summary
SPLP Volatile Organics

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 169786

Analyte Name	Lab Control Sample RQ0908463-02 Result	Expected	% Rec		% Rec Limits
Chlorobenzene	**23.1**	20.0	115		70 - 125
Chloroethane	**24.5**	20.0	122		70 - 125
Chloroform	**22.3**	20.0	112		70 - 125
Chloromethane	**23.3**	20.0	117		70 - 125
Dibromochloromethane	**20.8**	20.0	104		70 - 125
Dibromomethane	**17.3**	20.0	87		70 - 125
Dichlorodifluoromethane (CFC 12)	**20.6**	20.0	103		70 - 125
Dichloromethane	**21.6**	20.0	108		70 - 125
Ethylbenzene	**23.8**	20.0	119		70 - 125
Hexachlorobutadiene	**24.2**	20.0	121		70 - 125
Methyl tert-Butyl Ether	**17.6**	20.0	88		70 - 125
Naphthalene	**18.6**	20.0	93		70 - 125
Styrene	**23.8**	20.0	119		70 - 125
Tetrachloroethene (PCE)	**25.5**	20.0	128	*	70 - 125
Toluene	**23.0**	20.0	115		70 - 125
Trichloroethene (TCE)	**23.5**	20.0	117		70 - 125
Trichlorofluoromethane (CFC 11)	**26.0**	20.0	130	*	70 - 125
Vinyl Chloride	**24.7**	20.0	124		70 - 125
cis-1,2-Dichloroethene	**21.0**	20.0	105		70 - 125
cis-1,3-Dichloropropene	**19.5**	20.0	98		70 - 125
m,p-Xylenes	**48.0**	40.0	120		70 - 125
n-Butylbenzene	**24.5**	20.0	123		70 - 125
n-Propylbenzene	**24.1**	20.0	120		70 - 125
o-Xylene	**24.0**	20.0	120		70 - 125
sec-Butylbenzene	**25.6**	20.0	128	*	70 - 125
tert-Butylbenzene	**25.2**	20.0	126	*	70 - 125
trans-1,2-Dichloroethene	**21.6**	20.0	108		70 - 125
trans-1,3-Dichloropropene	**18.4**	20.0	92		70 - 125
1,1,1-Trichloroethane (TCA)	**23.0**	20.0	115		70 - 125

Comments:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MBLK

Lab Name: CASROCH Contract: NG

Lab Code: 10145 Case No.: R9-4817 SAS No.: SDG No.: SA-64

Lab File ID: F2487.D Lab Sample ID: RQ0908463-01

Date Analyzed: 09/10/09 Time Analyzed: 11:46

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA8

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS	RQ0908463-02	F2485.D	10:50
02	SPLPBLK	RQ0907884-01|1.0	F2488.D	12:21
03	10BSPLP3	R0904817-002|1.0	F2489.D	12:50

COMMENTS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: CASROCH Contract: NG

Lab Code: 10145 Case No.: R9-4817 SAS No.: SDG No.: SA-64

Lab File ID: F1081.D BFB Injection Date: 07/17/09

Instrument ID: MSVOA8 BFB Injection Time: 09:41

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.9
75	30.0 - 60.0% of mass 95	46.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	66.2
175	5.0 - 9.0% of mass 174	5.9 (9.0)1
176	95.0 - 101.0% of mass 174	65.0 (98.2)1
177	5.0 - 9.0% of mass 176	3.9 (6.1)2

1-Value is % mass 174 2-Value is % mass 176

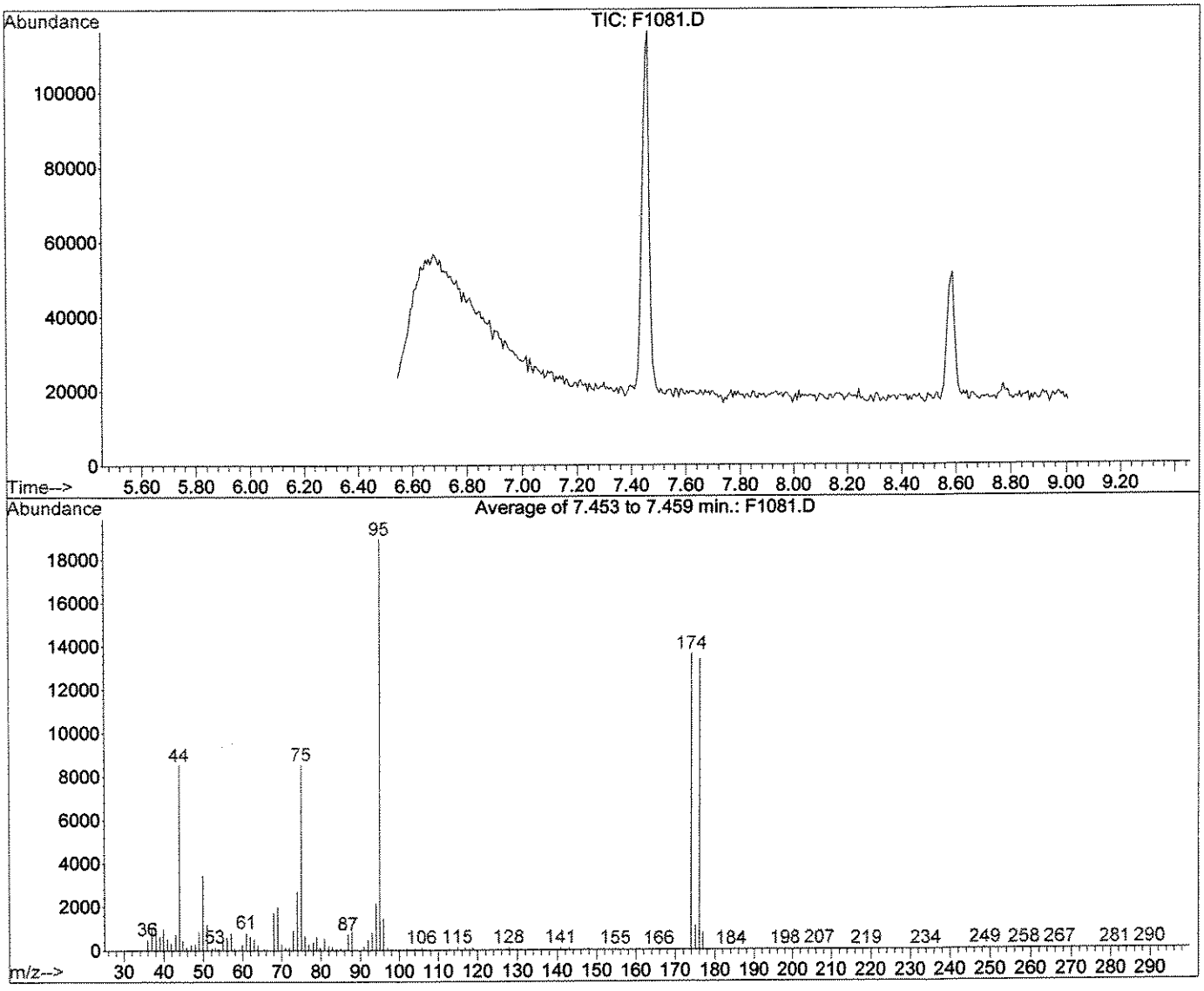
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	INST BLK	INST BLK	F1083.D	07/17/09	10:40
02	0.5 PPB STD	0.5 PPB STD	F1084.D	07/17/09	11:09
03	1.0 PPB STD	1.0 PPB STD	F1085.D	07/17/09	11:38
04	2.0 PPB STD	2.0 PPB STD	F1086.D	07/17/09	12:07
05	5.0 PPB STD	5.0 PPB STD	F1087.D	07/17/09	12:36
06	10 PPB STD	10 PPB STD	F1088.D	07/17/09	13:05
07	50 PPB STD	50 PPB STD	F1089.D	07/17/09	13:34
08	100 PPB STD	100 PPB STD	F1090.D	07/17/09	14:36
09	200 PPB STD	200 PPB STD	F1091.D	07/17/09	15:05

BFB

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1081.D Vial: 2
Acq On : 17 Jul 2009 9:41 am Operator: D.ZIMPFER
Sample : TUNE Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\MSVOA8\METHODS\W062509.M (RTE Integrator)
Title : 8260voa

D27.0



Spectrum Information: Average of 7.453 to 7.459 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	3430	PASS
75	95	30	60	45.0	8536	PASS
95	95	100	100	100.0	18950	PASS
96	95	5	9	7.7	1457	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	71.8	13610	PASS
175	174	5	9	8.1	1109	PASS
176	174	95	101	98.2	13364	PASS
177	176	5	9	6.0	801	PASS

F1081.D W062509.M Fri Jul 17 09:51:25 2009

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CASROCH Contract: NG

Lab Code: 10145 Case No.: R9-4817 SAS No.: SDG No.: SA-64

Lab File ID: F2483.D BFB Injection Date: 09/10/09

Instrument ID: MSVOA8 BFB Injection Time: 09:53

GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	44.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	70.9
175	5.0 - 9.0% of mass 174	5.7 (8.0)1
176	95.0 - 101.0% of mass 174	70.2 (99.0)1
177	5.0 - 9.0% of mass 176	4.0 (5.6)2

1-Value is % mass 174 2-Value is % mass 176

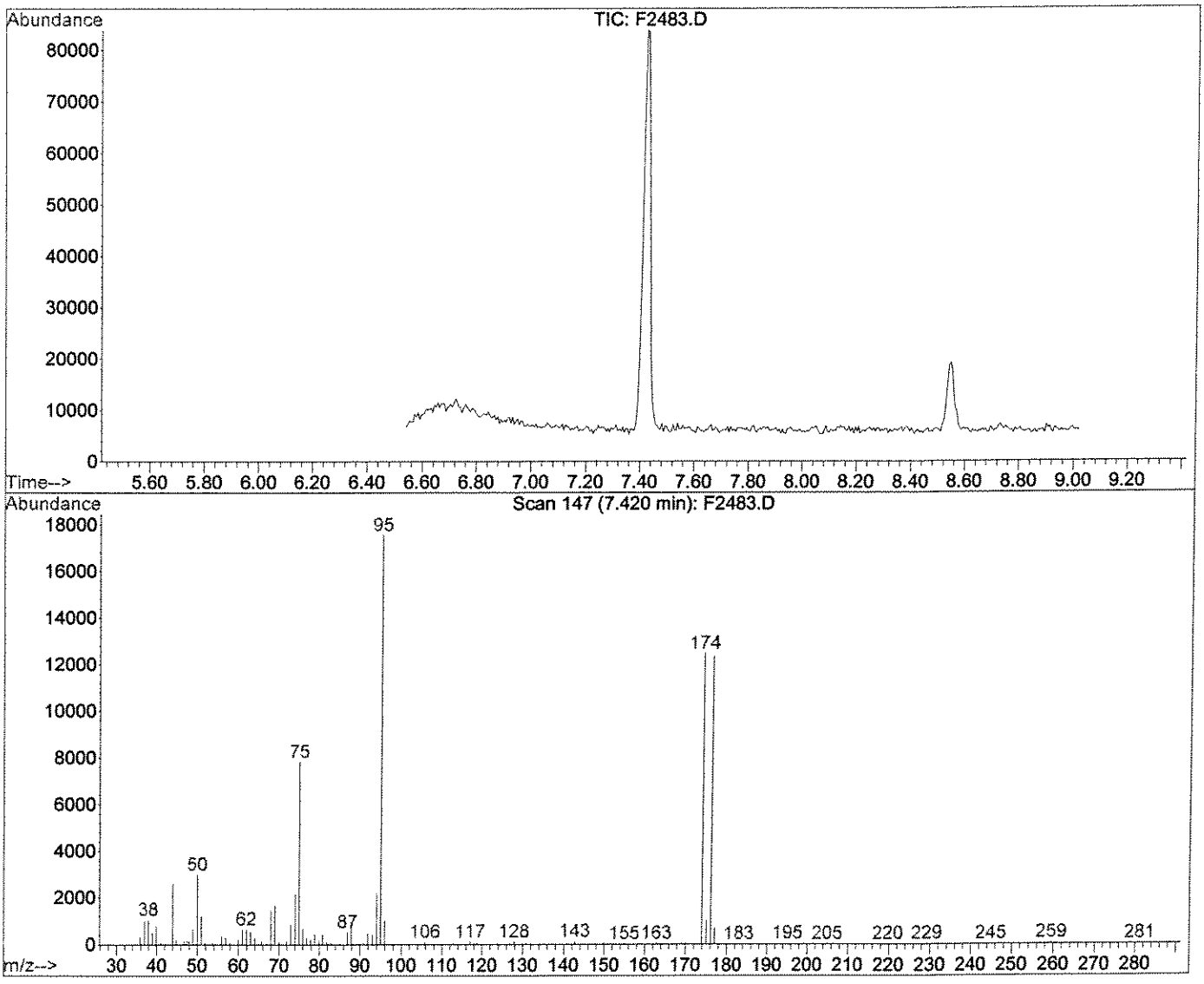
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD	CCV	F2484.D	09/10/09	10:21
02	LCS	RQ0908463-02	F2485.D	09/10/09	10:50
03	MBLK	RQ0908463-01	F2487.D	09/10/09	11:46
04	SPLPBLK	RQ0907884-01|1.0	F2488.D	09/10/09	12:21
05	10BSPLP3	R0904817-002|1.0	F2489.D	09/10/09	12:50

BFB

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2483.D Vial: 4
Acq On : 10 Sep 2009 9:53 am Operator: D.ZIMPFER
Sample : TUNE Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa

D29/10



Spectrum Information: Scan 147

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	2994	PASS
75	95	30	60	44.6	7833	PASS
95	95	100	100	100.0	17576	PASS
96	95	5	9	5.6	984	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	70.9	12464	PASS
175	174	5	9	8.0	1000	PASS
176	174	95	101	99.0	12342	PASS
177	176	5	9	5.6	696	PASS

F2483.D W071709.M Thu Sep 10 10:02:42 2009

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CASROCH Contract: NG

Lab Code: 10145 Case No.: R9-4817 SAS No.: SDG No.: SA-64

Lab File ID (Standard): F2484.D Date Analyzed: 09/10/09

Instrument ID: MSVOA8 Time Analyzed: 10:21

GC Column: DB-624 ID: 0.18 (mm) Heated Purge (Y/N): N

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	666460	3.45	1075917	3.97	891152	6.34
	UPPER LIMIT	1332920	2.95	2151834	3.47	1782304	5.84
	LOWER LIMIT	333230	3.95	537959	4.47	445576	6.84
	EPA SAMPLE NO.						
01	LCS	645219	3.45	1052491	3.97	867425	6.34
02	MBLK	617796	3.45	1006930	3.97	829947	6.34
03	SPLPBLK	632323	3.45	1026190	3.97	832296	6.33
04	10BSPLP3	620864	3.45	1026738	3.97	833678	6.33

IS1 = Pentafluorobenzene
IS2 = 1,4 - Difluorobenzene
IS3 = d5 - Chlorobenzene
IS4 = d4 - Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CASROCH Contract: NG

Lab Code: 10145 Case No.: R9-4817 SAS No.: SDG No.: SA-64

Lab File ID (Standard): F2484.D Date Analyzed: 09/10/09

Instrument ID: MSVOA8 Time Analyzed: 10:21

GC Column: DB-624 ID: 0.18 (mm) Heated Purge (Y/N): N

		IS4 AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	384958		8.55									
	UPPER LIMIT	769916		8.05									
	LOWER LIMIT	192479		9.05									
	EPA SAMPLE NO.												
01	LCS	371639		8.55									
02	MBLK	335253		8.54									
03	SPLPBLK	334195		8.54									
04	10BSPLP3	340289		8.54									

IS1 = Pentafluorobenzene
IS2 = 1,4 - Difluorobenzene
IS3 = d5 - Chlorobenzene
IS4 = d4 - Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

VOLATILE ORGANICS

SAMPLE DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/27/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.23	U	1.0	0.23	1	NA	9/10/09 12:50		169786	
Isopropylbenzene (Cumene)	0.36	U	2.0	0.36	1	NA	9/10/09 12:50		169786	
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	1	NA	9/10/09 12:50		169786	
1,1,2-Trichloroethane	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	
1,1-Dichloroethane (1,1-DCA)	0.64	U	1.0	0.64	1	NA	9/10/09 12:50		169786	
1,1-Dichloroethene (1,1-DCE)	0.59	U	1.0	0.59	1	NA	9/10/09 12:50		169786	
1,1-Dichloropropene	0.39	U	2.0	0.39	1	NA	9/10/09 12:50		169786	
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	1	NA	9/10/09 12:50		169786	
1,2,3-Trichloropropane	0.64	U	2.0	0.64	1	NA	9/10/09 12:50		169786	
1,2,4-Trichlorobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:50		169786	
1,2,4-Trimethylbenzene	0.53	U	2.0	0.53	1	NA	9/10/09 12:50		169786	
1,2-Dibromo-3-chloropropane (DBCP)	0.61	U	5.0	0.61	1	NA	9/10/09 12:50		169786	
1,2-Dibromoethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:50		169786	
1,2-Dichloroethane	0.42	U	1.0	0.42	1	NA	9/10/09 12:50		169786	
1,2-Dichloropropane	0.36	U	1.0	0.36	1	NA	9/10/09 12:50		169786	
1,3,5-Trimethylbenzene	0.37	U	2.0	0.37	1	NA	9/10/09 12:50		169786	
1,3-Dichlorobenzene	0.84	U	2.0	0.84	1	NA	9/10/09 12:50		169786	
1,3-Dichloropropane	0.51	U	2.0	0.51	1	NA	9/10/09 12:50		169786	
1,4-Dichlorobenzene	0.44	U	2.0	0.44	1	NA	9/10/09 12:50		169786	
2,2-Dichloropropane	0.42	U	2.0	0.42	1	NA	9/10/09 12:50		169786	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	9/10/09 12:50		169786	
2-Chlorotoluene	0.48	U	5.0	0.48	1	NA	9/10/09 12:50		169786	
2-Hexanone	0.78	U	10	0.78	1	NA	9/10/09 12:50		169786	
2-Methyl-2-propanol	11	U	100	11	1	NA	9/10/09 12:50		169786	
4-Chlorotoluene	0.52	U	5.0	0.52	1	NA	9/10/09 12:50		169786	
4-Isopropyltoluene	0.42	U	2.0	0.42	1	NA	9/10/09 12:50		169786	
4-Methyl-2-pentanone	0.71	U	10	0.71	1	NA	9/10/09 12:50		169786	
Acetone	1.6	U	20	1.6	1	NA	9/10/09 12:50		169786	
Benzene	0.42	U	1.0	0.42	1	NA	9/10/09 12:50		169786	
Bromobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:50		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/27/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromochloromethane	0.54	U	2.0	0.54	1	NA	9/10/09 12:50		169786	
Bromodichloromethane	0.84	U	1.0	0.84	1	NA	9/10/09 12:50		169786	
Bromoform	0.32	U	1.0	0.32	1	NA	9/10/09 12:50		169786	
Bromomethane	0.58	U	2.0	0.58	1	NA	9/10/09 12:50		169786	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	9/10/09 12:50		169786	
Chlorobenzene	0.44	U	1.0	0.44	1	NA	9/10/09 12:50		169786	
Chloroethane	0.36	U	2.0	0.36	1	NA	9/10/09 12:50		169786	
Chloroform	0.18	U	1.0	0.18	1	NA	9/10/09 12:50		169786	
Chloromethane	0.96	U	2.0	0.96	1	NA	9/10/09 12:50		169786	
Dibromochloromethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
Dibromomethane	0.54	U	1.0	0.54	1	NA	9/10/09 12:50		169786	
Dichlorodifluoromethane (CFC 12)	0.53	U	1.0	0.53	1	NA	9/10/09 12:50		169786	
Dichloromethane	0.50	U	2.0	0.50	1	NA	9/10/09 12:50		169786	
Diisopropyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:50		169786	
Ethyl tert-Butyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:50		169786	
Ethylbenzene	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
Hexachlorobutadiene	0.93	U	5.0	0.93	1	NA	9/10/09 12:50		169786	
Methyl tert-Butyl Ether	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	
Naphthalene	0.37	U	2.0	0.37	1	NA	9/10/09 12:50		169786	
Styrene	0.37	U	1.0	0.37	1	NA	9/10/09 12:50		169786	
Tetrachloroethene (PCE)	0.43	U	1.0	0.43	1	NA	9/10/09 12:50		169786	
Toluene	0.42	U	1.0	0.42	1	NA	9/10/09 12:50		169786	
Trichloroethene (TCE)	0.63	U	1.0	0.63	1	NA	9/10/09 12:50		169786	
Trichlorofluoromethane (CFC 11)	0.48	U	1.0	0.48	1	NA	9/10/09 12:50		169786	
Vinyl Chloride	0.52	U	1.0	0.52	1	NA	9/10/09 12:50		169786	
cis-1,2-Dichloroethene	0.48	U	1.0	0.48	1	NA	9/10/09 12:50		169786	
cis-1,3-Dichloropropene	0.38	U	1.0	0.38	1	NA	9/10/09 12:50		169786	
m,p-Xylenes	0.85	U	1.0	0.85	1	NA	9/10/09 12:50		169786	
n-Butylbenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:50		169786	
n-Propylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:50		169786	
o-Xylene	0.56	U	1.0	0.56	1	NA	9/10/09 12:50		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/27/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
sec-Butylbenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:50		169786	
tert-Amyl Methyl Ether	0.21	U	1.0	0.21	1	NA	9/10/09 12:50		169786	
tert-Butylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:50		169786	
trans-1,2-Dichloroethene	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	
trans-1,3-Dichloropropene	0.25	U	1.0	0.25	1	NA	9/10/09 12:50		169786	
1,1,1-Trichloroethane (TCA)	0.45	U	1.0	0.45	1	NA	9/10/09 12:50		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	70-130	9/10/09 12:50		
Dibromofluoromethane	105	70-130	9/10/09 12:50		
Toluene-d8	111	70-130	9/10/09 12:50		

Comments:

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2489.D Vial: 10
Acq On : 10 Sep 2009 12:50 pm Operator: D.ZIMPFER
Sample : R0904817-002|1.0 Inst : MS #8
Misc : NG 8260B.787 T4 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:02 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.45	168	620864	50.00	ppb	-0.02
42) 1,4 - Difluorobenzene	3.97	114	1026738	50.00	ppb	-0.03
63) d5 - Chlorobenzene	6.33	117	833678	50.00	ppb	-0.04
83) d4 - Dichlorobenzene	8.54	152	340289	50.00	ppb	-0.04
System Monitoring Compounds						
43) surr4,Dibrflmethane	3.45	113	315158	52.37	ppb	-0.02
Spiked Amount 50.000	Range 89 - 119		Recovery = 104.74%			
48) surr1,1,2-Diclethane	3.69	65	247545	44.45	ppb	-0.03
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.90%			
69) surr3,Toluene-d8	5.10	98	1217983	55.46	ppb	-0.03
Spiked Amount 50.000	Range 87 - 121		Recovery = 110.92%			
70) surr2,bfb	7.42	95	407539	49.94	ppb	-0.03
Spiked Amount 50.000	Range 85 - 122		Recovery = 99.88%			

Target Compounds						Qvalue
~~7) Chloroethane~~	~~1.71~~	~~64~~	~~1944~~	~~0.39~~	~~ppb~~ #	~~51~~
~~16) Acetone~~	~~2.13~~	~~43~~	~~2082~~	~~2.55~~	~~ppb~~ #	~~75~~
~~22) Methyl Acetate~~	~~2.32~~	~~43~~	~~442~~	~~Below Cal~~	#	~~71~~
23) Methylene Chloride	2.38	84	2588	0.44	ppb #	79
~~34) 2-Butanone~~	~~3.15~~	~~43~~	~~836~~	~~Below Cal~~	#	~~65~~
~~36) Propionitrile~~	~~3.09~~	~~54~~	~~2743~~	~~7.01~~	~~ppb~~ #	~~1~~
~~40) Tetrahydrofuran~~	~~3.34~~	~~42~~	~~934~~	~~0.93~~	~~ppb~~ #	~~35~~
~~64) 4-Methyl-2-Pentanone~~	~~5.00~~	~~43~~	~~981~~	~~Below Cal~~	#	~~75~~
~~72) 2-Hexanone~~	~~5.64~~	~~43~~	~~1417~~	~~Below Cal~~	#	~~27~~
73) N-Butyl Acetate	5.77	43	2346	0.36	ppb #	66
~~86) Cyclohexanone~~	~~7.37~~	~~55~~	~~439~~	~~1.45~~	~~ppb~~ #	~~66~~

DL 9/11

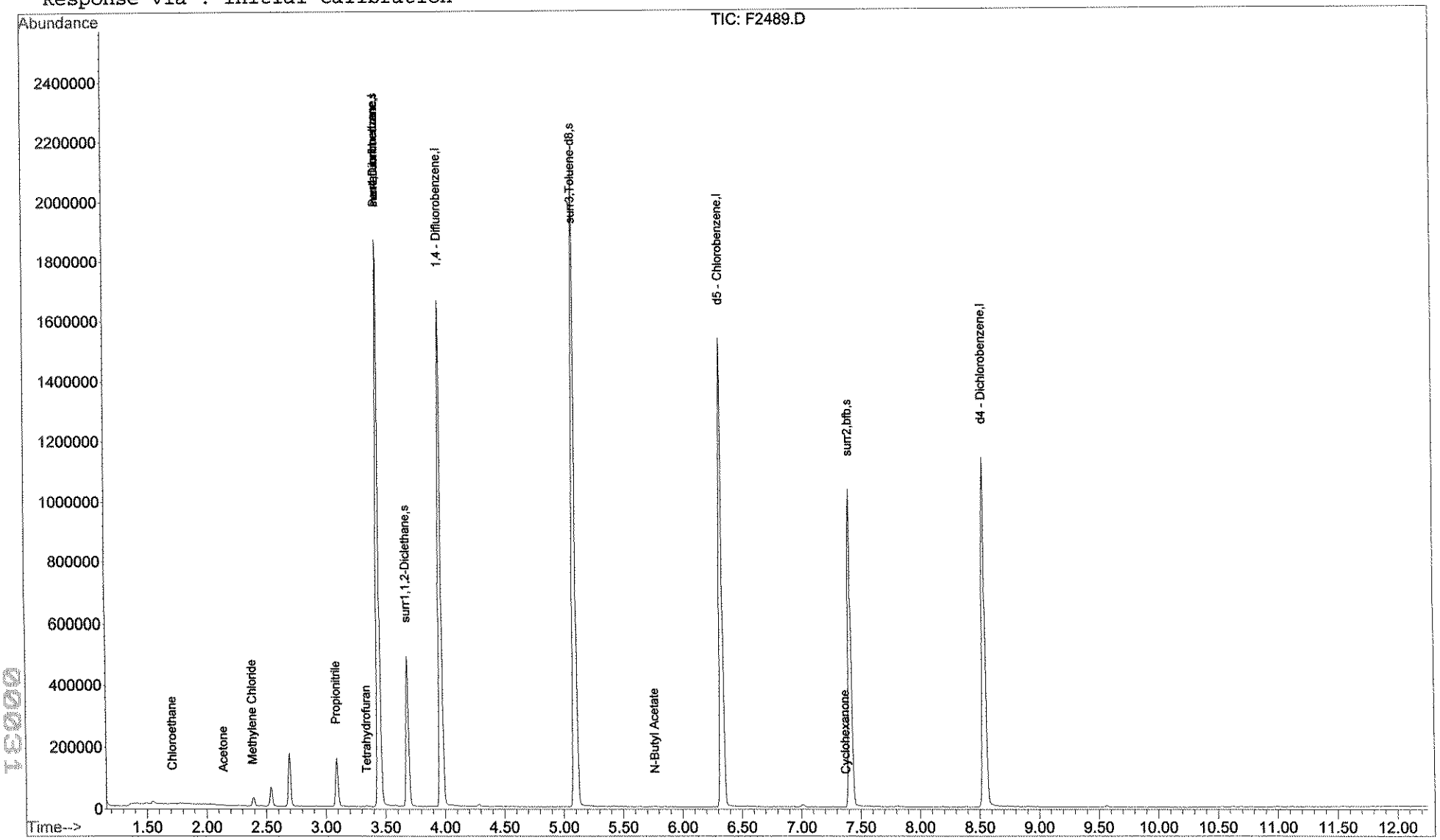
(#) = qualifier out of range (m) = manual integration
F2489.D W071709.M Thu Sep 10 13:02:37 2009

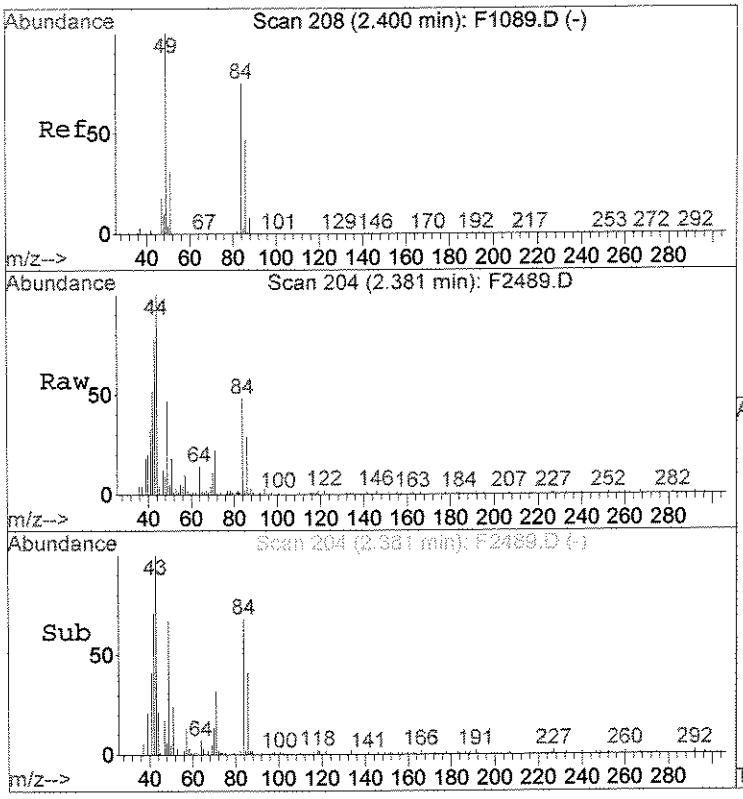
00030

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2489.D Vial: 10
Acq On : 10 Sep 2009 12:50 pm Operator: D.ZIMPFER
Sample : R0904817-002|1.0 Inst : MS #8
Misc : NG 8260B.787 T4 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:02 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration

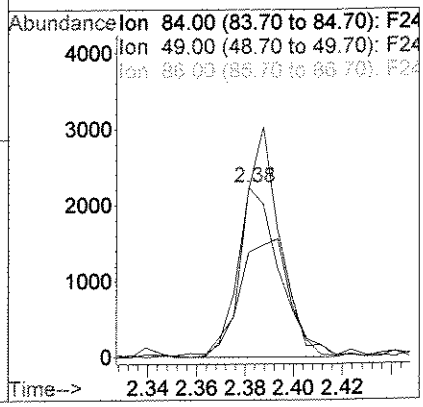




#23
Methylene Chloride
Concen: 0.44 ppb
RT: 2.38 min Scan# 204
Delta R.T. -0.02 min
Lab File: F2489.D
Acq: 10 Sep 2009 12:50 pm

Tgt Ion: 84 Resp: 2588

Ion	Ratio	Lower	Upper
84	100		
49	99.0	107.7	161.5#
86	61.7	50.4	75.6



VOLATILE ORGANICS

STANDARDS DATA

Initial Calibration - Summary Report

Calibration ID:	CAL972	8260B. H_2O	**Instrument ID:**	MS #8	
Method ID:	MJ164	7.17.2009	**Column Name:**	MS	

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Dichlorodifluoromethane	TRG	AverageRF		0.479	15	7.3			OK	
Chloromethane	TRG	AverageRF	0.100	0.587	15	8.5			OK	
Vinyl Chloride	TRG	AverageRF		0.571	15	4.9			OK	
Bromomethane	TRG	AverageRF		0.316	15	9.3			OK	
Chloroethane	TRG	AverageRF		0.400	15	10.8			OK	
Dichlorofluoromethane (CFC 21)	TRG	AverageRF		0.894	15	8.2			OK	
Trichlorofluoromethane	TRG	AverageRF		0.548	15	6.7			OK	
Diethyl Ether	TRG	AverageRF		0.319	15	7.7			OK	
1,2-Dichloro-1,1,2-trifluoroethane (CF	TRG	AverageRF		0.240	15	9.6			OK	
2,2-Dichloro-1,1,1-trifluoroethane (CF	TRG	AverageRF		0.430	15	7.5			OK	
Acrolein	TRG	AverageRF		0.027	15	8.4			OK	
Trichlorotrifluoroethane	TRG	AverageRF		0.170	15	11.6			OK	
1,1-Dichloroethene	MS	AverageRF		0.408	15	11.4			OK	
Acetone	TRG	AverageRF		0.066	15	7.9			OK	
2-Propanol	TRG	AverageRF		0.013	15	4.2			OK	
Iodomethane (Methyl Iodide)	TRG	AverageRF		0.222	15	10.0			OK	
Carbon Disulfide	TRG	AverageRF		1.345	15	7.4			OK	
Acetonitrile	TRG	AverageRF		0.017	15	10.3			*	
Allyl Chloride	TRG	AverageRF		0.270	15	6.8			OK	
Methyl Acetate	TRG	Linear		0.331			.99	0.9998	OK	-0.93 *
Methylene Chloride	TRG	AverageRF		0.471	15	2.6			OK	
tert-Butyl Alcohol	TRG	AverageRF		0.017	15	4.6			OK	
Acrylonitrile	TRG	AverageRF		0.098	15	5.7			OK	
Methyl tert-Butyl Ether	TRG	AverageRF		0.916	15	3.2			OK	
trans-1,2-Dichloroethene	TRG	AverageRF		0.472	15	8.3			OK	
1,1-Dichloroethane	TRG	AverageRF	0.100	0.871	15	6.3			OK	
Diisopropyl Ether	TRG	AverageRF		1.844	15	5.7			OK	
Vinyl Acetate	TRG	AverageRF		0.047	15	5.2			OK	
2-Chloro-1,3-butadiene	TRG	AverageRF		0.646	15	6.7			OK	
ETBE	TRG	AverageRF		1.310	15	4.9			OK	
2,2-Dichloropropane	TRG	AverageRF		0.690	15	7.3			OK	
2-Butanone (MEK)	TRG	Linear		0.171			.99	0.9996	OK	-0.20 *
cis-1,2-Dichloroethene	TRG	AverageRF		0.521	15	9.1			OK	
Propionitrile	TRG	AverageRF		0.032	15	6.9			OK	
Methacrylonitrile	TRG	AverageRF		0.109	15	8.2			OK	
Bromochloromethane	TRG	AverageRF		0.198	15	8.0			OK	
Chloroform	TRG	AverageRF		0.802	15	6.1			OK	
Tetrahydrofuran	TRG	AverageRF		0.081	15	9.8			OK	
1,1,1-Trichloroethane (TCA)	TRG	AverageRF		0.638	15	8.4			OK	
Dibromofluoromethane	SURR	AverageRF		0.293	15	5.6			NA	
Cyclohexane	TRG	AverageRF		0.548	15	8.2			OK	
Carbon Tetrachloride	TRG	AverageRF		0.300	15	9.6			OK	
1,1-Dichloropropene	TRG	AverageRF		0.405	15	7.8			OK	
Isobutyl Alcohol	TRG	Linear		0.008			.99	0.9990	OK	23.63 *
1,2-Dichloroethane-d4	SURR	AverageRF		0.271	15	5.4			NA	
Benzene	MS	AverageRF		1.187	15	4.8			OK	
1,2-Dichloroethane (EDC)	TRG	AverageRF		0.280	15	4.3			OK	
TAME	TRG	AverageRF		0.633	15	3.2			OK	
n-Heptane	TRG	Linear		0.511			.99	0.9988	OK	2.95 *
Trichloroethene (TCE)	MS	AverageRF		0.281	15	6.3			OK	
Methylcyclohexane	TRG	AverageRF		0.442	15	8.8			OK	

Initial Calibration - Summary Report

Calibration ID: CAL972
Method ID: MJ164
Instrument ID: MS #8
Column Name: MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
1,2-Dichloropropane	TRG	AverageRF		0.296	15	8.9			OK	
Methyl Methacrylate	TRG	AverageRF		0.127	15	9.0			OK	
1,4-Dioxane	TRG	AverageRF		0.001	15	9.3			OK	
Dibromomethane	TRG	AverageRF		0.139	15	12.4			OK	
Bromodichloromethane	TRG	AverageRF		0.340	15	5.3			OK	
2-Chloroethyl Vinyl Ether	TRG	AverageRF		0.134	15	13.3			OK	
cis-1,3-Dichloropropene	TRG	AverageRF		0.432	15	5.8			OK	
4-Methyl-2-pentanone (MIBK)	TRG	Linear		0.213			.99	0.9997	OK	0.45
Toluene	MS	AverageRF		1.401	15	5.7			OK	
trans-1,3-Dichloropropene	TRG	AverageRF		0.411	15	6.4			OK	
Ethyl Methacrylate	TRG	AverageRF		0.300	15	6.2			OK	
1,1,2-Trichloroethane	TRG	AverageRF		0.184	15	11.6			OK	
Toluene-d8	SURR	AverageRF		1.317	15	5.4			NA	
4-Bromofluorobenzene	SURR	AverageRF		0.489	15	2.6			NA	
Tetrachloroethene (PCE)	TRG	AverageRF		0.305	15	7.3			OK	
2-Hexanone	TRG	Linear		0.133			.99	0.9998	OK	0.08
n-Butyl Acetate	TRG	AverageRF		0.394	15	14.3			OK	
1,3-Dichloropropane	TRG	AverageRF		0.394	15	3.5			OK	
Dibromochloromethane	TRG	AverageRF		0.225	15	5.2			OK	
1,2-Dibromoethane (EDB)	TRG	AverageRF		0.188	15	3.8			OK	
Chlorobenzene	MS	AverageRF	0.300	0.808	15	5.4			OK	
1,1,1,2-Tetrachloroethane	TRG	AverageRF		0.256	15	3.8			OK	
Ethylbenzene	TRG	AverageRF		1.522	15	5.8			OK	
m,p-Xylenes	TRG	AverageRF		0.546	15	5.6			OK	
o-Xylene	TRG	AverageRF		0.515	15	4.3			OK	
Styrene	TRG	AverageRF		0.839	15	3.8			OK	
Bromoform	TRG	AverageRF	0.100	0.267	15	3.3			OK	
Isopropylbenzene	TRG	AverageRF		3.024	15	8.4			OK	
Cyclohexanone	TRG	AverageRF		0.045	15	13.3			*	
1,1,2,2-Tetrachloroethane	TRG	AverageRF	0.300	0.498	15	6.0			OK	
trans-1,4-Dichloro-2-butene	TRG	AverageRF		0.108	15	7.1			OK	
1,2,3-Trichloropropane	TRG	AverageRF		0.139	15	12.0			OK	
n-Propylbenzene	TRG	AverageRF		3.809	15	8.9			OK	
Bromobenzene	TRG	AverageRF		0.676	15	3.4			OK	
1,3,5-Trimethylbenzene	TRG	AverageRF		2.505	15	8.5			OK	
2-Chlorotoluene	TRG	AverageRF		2.251	15	6.1			OK	
4-Chlorotoluene	TRG	AverageRF		2.512	15	6.8			OK	
tert-Butylbenzene	TRG	AverageRF		2.065	15	10.4			OK	
1,2,4-Trimethylbenzene	TRG	AverageRF		2.447	15	7.5			OK	
sec-Butylbenzene	TRG	AverageRF		3.123	15	11.9			OK	
4-Isopropyltoluene	TRG	AverageRF		2.482	15	11.9			OK	
1,3-Dichlorobenzene	TRG	AverageRF		1.228	15	6.2			OK	
1,4-Dichlorobenzene	TRG	AverageRF		1.221	15	7.3			OK	
n-Butylbenzene	TRG	AverageRF		2.367	15	14.5			OK	
1,2-Dichlorobenzene	TRG	AverageRF		1.091	15	4.6			OK	
1,2-Dibromo-3-chloropropane (DBCP)	TRG	AverageRF		0.076	15	3.1			OK	
1,2,4-Trichlorobenzene	TRG	AverageRF		0.595	15	10.2			OK	
Hexachlorobutadiene	TRG	Linear		0.251			.99	0.9952	OK	4.34 *
Naphthalene	TRG	AverageRF		1.240	15	5.2			OK	
1,2,3-Trichlorobenzene	TRG	AverageRF		0.509	15	8.0			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL972	**Instrument ID:**	MS #8
Method ID:	MJ164	**Column Name:**	MS

Initial Calibration - Summary Report

Calibration ID:	CAL972	**Instrument ID:**	MS #8
Method ID:	MJ164	**Column Name:**	MS

SPCC and CCC Evaluations

Parameter Name	Type	SPCC Criteria	SPCC Result	CCC Criteria	CCC Result
Chloromethane	SPCC	0.100	0.587		
Vinyl Chloride	CCC			30	4.9
1,1-Dichloroethene	CCC			30	11.4
1,1-Dichloroethane	SPCC	0.100	0.871		
Chloroform	CCC			30	6.1
1,2-Dichloropropane	CCC			30	8.9
Toluene	CCC			30	5.7
Chlorobenzene	SPCC	0.300	0.808		
Ethylbenzene	CCC			30	5.8
Bromoform	SPCC	0.100	0.267		
1,1,2,2-Tetrachloroethane	SPCC	0.300	0.498		

Initial Calibration - Detailed Report

Calibration ID:	CAL972 E2608. H_2O 7.17.2009	**Instrument ID:**	MS #8
Method ID:	MJ164	**Column Name:**	MS
		Calibration Fit:	AverageRF

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
8007	J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D	07/17/2009 11:09	07/17/2009 14:09	07/17/2009 16:32
8008	J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D	07/17/2009 11:38	07/17/2009 15:50	07/17/2009 16:32
8009	J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D	07/17/2009 12:07	07/17/2009 15:53	07/17/2009 16:32
8010	J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D	07/17/2009 12:36	07/17/2009 15:55	07/17/2009 16:32
8011	J:\ACQUDATA\MSVOA8\DATA\071709\F1088.D	07/17/2009 13:05	07/17/2009 13:56	07/17/2009 16:32
8012	J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D	07/17/2009 13:34	07/17/2009 14:36	07/17/2009 16:45
8013	J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D	07/17/2009 14:36	07/17/2009 14:51	07/17/2009 16:32
8014	J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D	07/17/2009 15:05	07/17/2009 15:18	07/17/2009 16:32

	0.5	1.0	2.0	5.0 FileID	10	50 20	100 50	200 100	Mean	
Parameter Name	**8007**	**8008**	**8009**	**8010**	**8011**	**8012**	**8013**	**8014**	**RF**	**%RSD**
Dichlorodifluoromethane	0.554	0.477	0.465	0.482	0.434	0.457	0.474	0.493	0.479	7.3
Chloromethane	0.681	0.607	0.620	0.573	0.535	0.528	0.561	0.593	0.587	8.5
Vinyl Chloride	0.585	0.591	0.606	0.566	0.519	0.545	0.567	0.590	0.571	4.9
Bromomethane	0.361	0.307	0.306	0.298	0.266	0.311	0.332	0.344	0.316	9.3
Chloroethane	0.450	0.440	0.459	0.398	0.355	0.361	0.366	0.371	0.400	10.8
Dichlorofluoromethane (CFC 21)	0.997	0.960	0.933	0.889	0.899	0.777	0.805	0.892	0.894	8.2
Trichlorofluoromethane	0.533	0.603	0.590	0.543	0.489	0.519	0.558	0.547	0.548	6.7
Diethyl Ether	0.374	0.327	0.305	0.323	0.296	0.305	0.316	0.306	0.319	7.7
1,2-Dichloro-1,1,2-trifluoroethane (	0.271	0.268	0.244	0.230	0.229	0.202	0.225	0.247	0.240	9.6
2,2-Dichloro-1,1,1-trifluoroethane (	0.455	0.433	0.478	0.418	0.437	0.391	0.381	0.444	0.430	7.5
Acrolein		0.030	0.031	0.028	0.027	0.024	0.025	0.026	0.027	8.4
Trichlorotrifluoroethane	0.136	0.189	0.194	0.169	0.151	0.163	0.179	0.181	0.170	11.6
1,1-Dichloroethene	0.503	0.437	0.414	0.385	0.351	0.375	0.395	0.404	0.408	11.4
Acetone				0.072	0.071	0.062	0.063	0.061	0.066	7.9
2-Propanol		0.013	0.013	0.013	0.012	0.012	0.013	0.013	0.013	4.2
Iodomethane (Methyl Iodide)			0.187	0.205	0.225	0.244	0.231	0.241	0.222	10.0
Carbon Disulfide	1.514	1.423	1.427	1.327	1.271	1.229	1.257	1.310	1.345	7.4
Acetonitrile				0.017	0.017	0.014	0.019	0.016	0.017	10.3
Allyl Chloride	0.271	0.260	0.268	0.277	0.232	0.274	0.290	0.288	0.270	6.8
Methyl Acetate	0.414	0.338	0.359	0.389	0.338	0.273	0.269	0.266	0.331	17.1# L
Methylene Chloride	0.486	0.463	0.479	0.486	0.451	0.462	0.472	0.469	0.471	2.6
tert-Butyl Alcohol	0.016	0.017	0.017	0.019	0.018	0.016	0.018	0.018	0.017	4.6
Acrylonitrile	0.110	0.093	0.102	0.098	0.096	0.093	0.097	0.095	0.098	5.7
Methyl tert-Butyl Ether	0.945	0.932	0.906	0.963	0.887	0.896	0.919	0.879	0.916	3.2
trans-1,2-Dichloroethene	0.533	0.510	0.493	0.440	0.416	0.440	0.464	0.477	0.472	8.3
1,1-Dichloroethane	0.963	0.886	0.911	0.892	0.781	0.830	0.850	0.851	0.871	6.3
Diisopropyl Ether	1.963	1.965	1.942	1.853	1.813	1.688	1.761	1.764	1.844	5.7
Vinyl Acetate		0.051	0.046	0.048	0.050	0.045	0.046	0.045	0.047	5.2
2-Chloro-1,3-butadiene	0.712	0.707	0.634	0.657	0.604	0.608	0.608	0.635	0.646	6.7
ETBE	1.396	1.382	1.309	1.335	1.325	1.203	1.256	1.275	1.310	4.9
2,2-Dichloropropane	0.755	0.741	0.728	0.703	0.612	0.654	0.672	0.652	0.690	7.3
2-Butanone (MEK)			0.343	0.209	0.132	0.115	0.117	0.113	0.171	53.5# L
cis-1,2-Dichloroethene	0.612	0.550	0.547	0.507	0.461	0.481	0.502	0.511	0.521	9.1
Propionitrile		0.033	0.036	0.030	0.032	0.029	0.031	0.031	0.032	6.9
Methacrylonitrile		0.124	0.115	0.116	0.105	0.100	0.103	0.103	0.109	8.2
Bromochloromethane	0.230	0.212	0.195	0.199	0.183	0.187	0.191	0.186	0.198	8.0
Chloroform	0.843	0.876	0.835	0.820	0.729	0.761	0.781	0.774	0.802	6.1
Tetrahydrofuran		0.086	0.091	0.078	0.090	0.075	0.074	0.072	0.081	9.8

Initial Calibration - Detailed Report

Calibration ID: CAL972
Method ID: MJ164

Instrument ID: MS #8
Column Name: MS
Calibration Fit: AverageRF

Parameter Name	FileID 8007	8008	8009	8010	8011	8012	8013	8014	Mean RF	%RSD
1,1,1-Trichloroethane (TCA)	0.708	0.673	0.699	0.641	0.557	0.584	0.615	0.624	0.638	8.4
Dibromofluoromethane			0.261	0.292	0.295	0.304	0.306	0.300	0.293	5.6
Cyclohexane	0.603	0.564	0.605	0.519	0.523	0.486	0.508	0.576	0.548	8.2
Carbon Tetrachloride	0.325	0.341	0.325	0.282	0.255	0.280	0.292	0.300	0.300	9.6
1,1-Dichloropropene	0.424	0.441	0.444	0.391	0.353	0.377	0.399	0.412	0.405	7.8
Isobutyl Alcohol		0.015	0.008	0.009	0.006	0.006	0.006	0.006	0.008	42.3#L
1,2-Dichloroethane-d4			0.243	0.277	0.270	0.285	0.280	0.272	0.271	5.4
Benzene	1.250	1.216	1.239	1.212	1.073	1.146	1.172	1.185	1.187	4.8
1,2-Dichloroethane (EDC)	0.287	0.283	0.292	0.295	0.275	0.273	0.271	0.260	0.280	4.3
TAME	0.649	0.636	0.625	0.664	0.646	0.607	0.607	0.629	0.633	3.2
n-Heptane		0.741	0.508	0.416	0.324	0.487	0.543	0.560	0.511	25.3#L
Trichloroethene (TCE)	0.272	0.301	0.308	0.283	0.256	0.265	0.275	0.288	0.281	6.3
Methylcyclohexane	0.466	0.478	0.499	0.411	0.432	0.394	0.399	0.458	0.442	8.8
1,2-Dichloropropane	0.353	0.293	0.302	0.302	0.261	0.281	0.289	0.290	0.296	8.9
Methyl Methacrylate	0.141	0.134	0.142	0.129	0.117	0.114	0.116	0.119	0.127	9.0
1,4-Dioxane				0.001	0.001	0.001	0.001	0.001	0.001	9.3
Dibromomethane	0.171	0.153	0.150	0.135	0.127	0.126	0.125	0.126	0.139	12.4
Bromodichloromethane	0.361	0.371	0.340	0.341	0.316	0.325	0.335	0.335	0.340	5.3
2-Chloroethyl Vinyl Ether	0.174	0.140	0.135	0.127	0.127	0.122	0.121	0.123	0.134	13.3
cis-1,3-Dichloropropene	0.476	0.449	0.444	0.429	0.393	0.414	0.421	0.426	0.432	5.8
4-Methyl-2-pentanone (MIBK)		0.245	0.208	0.244	0.219	0.189	0.191	0.196	0.213	11.2#L
Toluene	1.495	1.454	1.491	1.402	1.264	1.328	1.361	1.416	1.401	5.7
trans-1,3-Dichloropropene	0.462	0.416	0.428	0.418	0.377	0.393	0.394	0.397	0.411	6.4
Ethyl Methacrylate	0.266	0.318	0.316	0.324	0.295	0.289	0.295	0.298	0.300	6.2
1,1,2-Trichloroethane	0.232	0.168	0.195	0.184	0.172	0.172	0.171	0.175	0.184	11.6
Toluene-d8			1.177	1.329	1.320	1.361	1.361	1.355	1.317	5.4
4-Bromofluorobenzene			0.472	0.485	0.484	0.503	0.505	0.488	0.489	2.6
Tetrachloroethene (PCE)	0.314	0.307	0.335	0.281	0.273	0.291	0.305	0.331	0.305	7.3
2-Hexanone			0.122	0.143	0.139	0.135	0.128	0.128	0.133	5.8#L
n-Butyl Acetate		0.461	0.487	0.376	0.376	0.346	0.349	0.363	0.394	14.3
1,3-Dichloropropane		0.382	0.410	0.416	0.383	0.383	0.389	0.398	0.394	3.5
Dibromochloromethane	0.248	0.222	0.221	0.230	0.207	0.217	0.224	0.230	0.225	5.2
1,2-Dibromoethane (EDB)	0.174	0.193	0.195	0.194	0.182	0.188	0.188	0.191	0.188	3.8
Chlorobenzene	0.821	0.838	0.875	0.802	0.731	0.770	0.801	0.822	0.808	5.4
1,1,1,2-Tetrachloroethane	0.266	0.255	0.264	0.264	0.237	0.248	0.254	0.257	0.256	3.8
Ethylbenzene	1.602	1.576	1.599	1.459	1.356	1.460	1.545	1.576	1.522	5.8
m,p-Xylenes	0.578	0.550	0.559	0.521	0.487	0.534	0.558	0.578	0.546	5.6
o-Xylene	0.521	0.510	0.551	0.499	0.476	0.508	0.524	0.531	0.515	4.3
Styrene	0.858	0.838	0.861	0.821	0.772	0.831	0.863	0.867	0.839	3.8
Bromoform	0.281	0.259	0.268	0.260	0.257	0.262	0.273	0.277	0.267	3.3
Isopropylbenzene	2.991	3.159	3.324	2.751	2.593	2.967	3.127	3.279	3.024	8.4
Cyclohexanone			0.051	0.052	0.045	0.039	0.038	0.043	0.045	13.3
1,1,2,2-Tetrachloroethane	0.550	0.517	0.530	0.481	0.484	0.469	0.473	0.480	0.498	6.0
trans-1,4-Dichloro-2-butene		0.095	0.108	0.117	0.116	0.103	0.107	0.106	0.108	7.1
1,2,3-Trichloropropane		0.167	0.158	0.137	0.130	0.125	0.126	0.130	0.139	12.0
n-Propylbenzene	3.832	3.964	4.174	3.447	3.188	3.772	3.998	4.100	3.809	8.9
Bromobenzene	0.665	0.701	0.707	0.686	0.645	0.649	0.669	0.686	0.676	3.4
1,3,5-Trimethylbenzene	2.616	2.611	2.789	2.249	2.150	2.435	2.554	2.638	2.505	8.5
2-Chlorotoluene	2.362	2.313	2.390	2.070	2.041	2.179	2.285	2.369	2.251	6.1
4-Chlorotoluene	2.544	2.577	2.740	2.290	2.252	2.451	2.586	2.653	2.512	6.8

Initial Calibration - Detailed Report

Calibration ID: CAL972
Method ID: MJ164

Instrument ID: MS #8
Column Name: MS
Calibration Fit: AverageRF

Parameter Name	FileID 8007	8008	8009	8010	8011	8012	8013	8014	Mean RF	%RSD
tert-Butylbenzene	2.116	2.235	2.295	1.872	1.642	2.041	2.110	2.211	2.065	10.4
1,2,4-Trimethylbenzene	2.506	2.508	2.723	2.258	2.128	2.407	2.480	2.566	2.447	7.5
sec-Butylbenzene	3.131	3.226	3.401	2.800	2.375	3.150	3.391	3.510	3.123	11.9
4-Isopropyltoluene	2.524	2.561	2.737	2.204	1.897	2.499	2.660	2.771	2.482	11.9
1,3-Dichlorobenzene	1.216	1.261	1.325	1.128	1.112	1.221	1.266	1.297	1.228	6.2
1,4-Dichlorobenzene	1.345	1.186	1.340	1.108	1.122	1.186	1.233	1.248	1.221	7.3
n-Butylbenzene	2.358	2.391	2.583	2.099	1.685	2.410	2.623	2.785	2.367	14.5
1,2-Dichlorobenzene	1.145	1.110	1.140	1.047	0.996	1.076	1.090	1.122	1.091	4.6
1,2-Dibromo-3-chloropropane (DBC		0.080	0.075	0.077	0.073	0.075	0.074	0.077	0.076	3.1
1,2,4-Trichlorobenzene	0.604	0.563	0.595	0.540	0.503	0.611	0.653	0.694	0.595	10.2
Hexachlorobutadiene		0.255	0.280	0.239	0.134	0.252	0.279	0.317	0.251	23.0#
Naphthalene	1.361	1.193	1.279	1.199	1.175	1.192	1.227	1.292	1.240	5.2
1,2,3-Trichlorobenzene	0.529	0.514	0.520	0.452	0.449	0.504	0.529	0.572	0.509	8.0

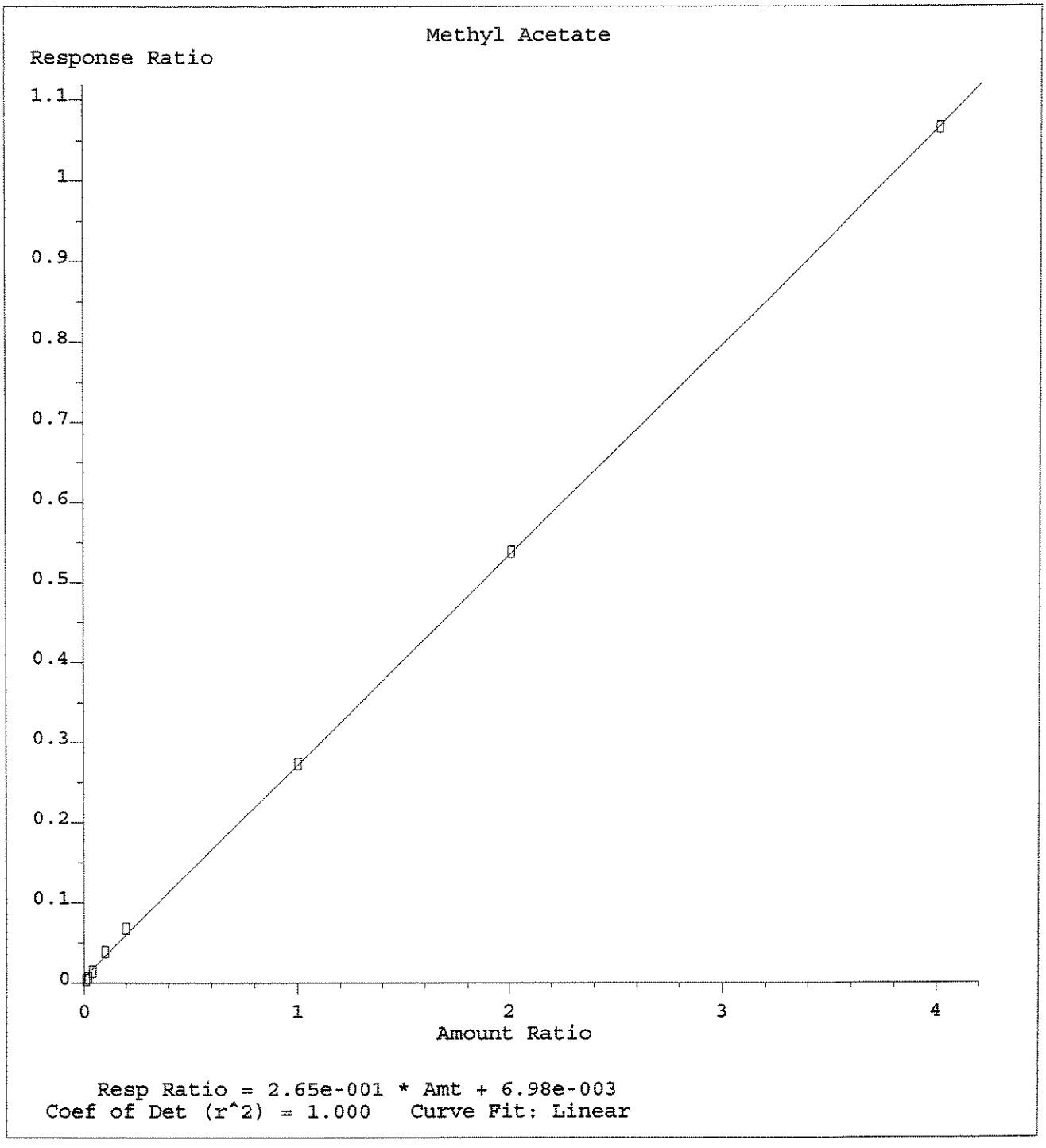
 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

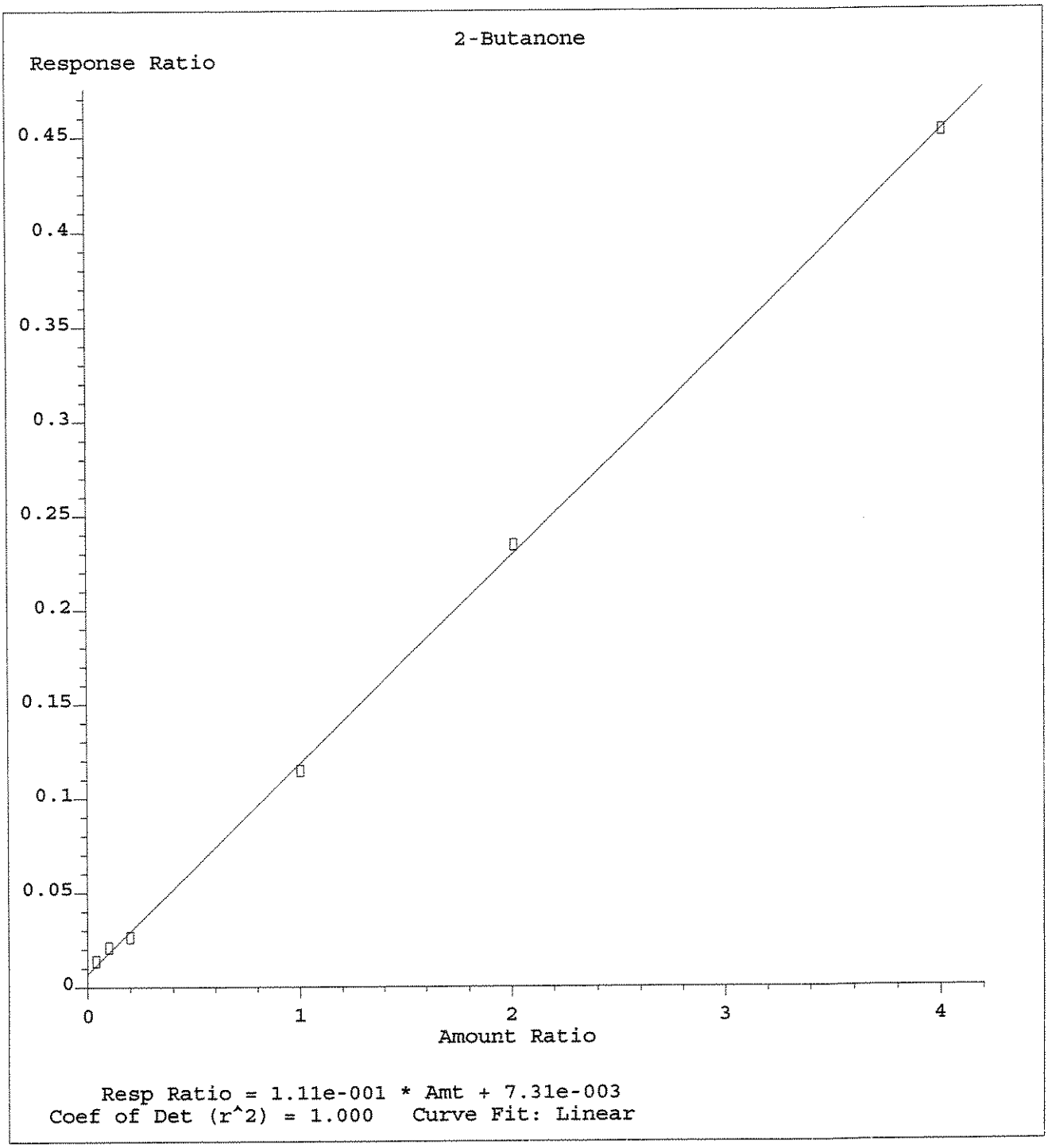
Calibration ID:	CAL972	**Instrument ID:**	MS #8
Method ID:	MJ164	**Column Name:**	MS
		Calibration Fit:	Linear

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
8007	J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D	07/17/2009 11:09	07/17/2009 14:09	07/17/2009 16:32
8008	J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D	07/17/2009 11:38	07/17/2009 15:50	07/17/2009 16:32
8009	J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D	07/17/2009 12:07	07/17/2009 15:53	07/17/2009 16:32
8010	J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D	07/17/2009 12:36	07/17/2009 15:55	07/17/2009 16:32
8011	J:\ACQUDATA\MSVOA8\DATA\071709\F1088.D	07/17/2009 13:05	07/17/2009 13:56	07/17/2009 16:32
8012	J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D	07/17/2009 13:34	07/17/2009 14:36	07/17/2009 16:45
8013	J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D	07/17/2009 14:36	07/17/2009 14:51	07/17/2009 16:32
8014	J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D	07/17/2009 15:05	07/17/2009 15:18	07/17/2009 16:32

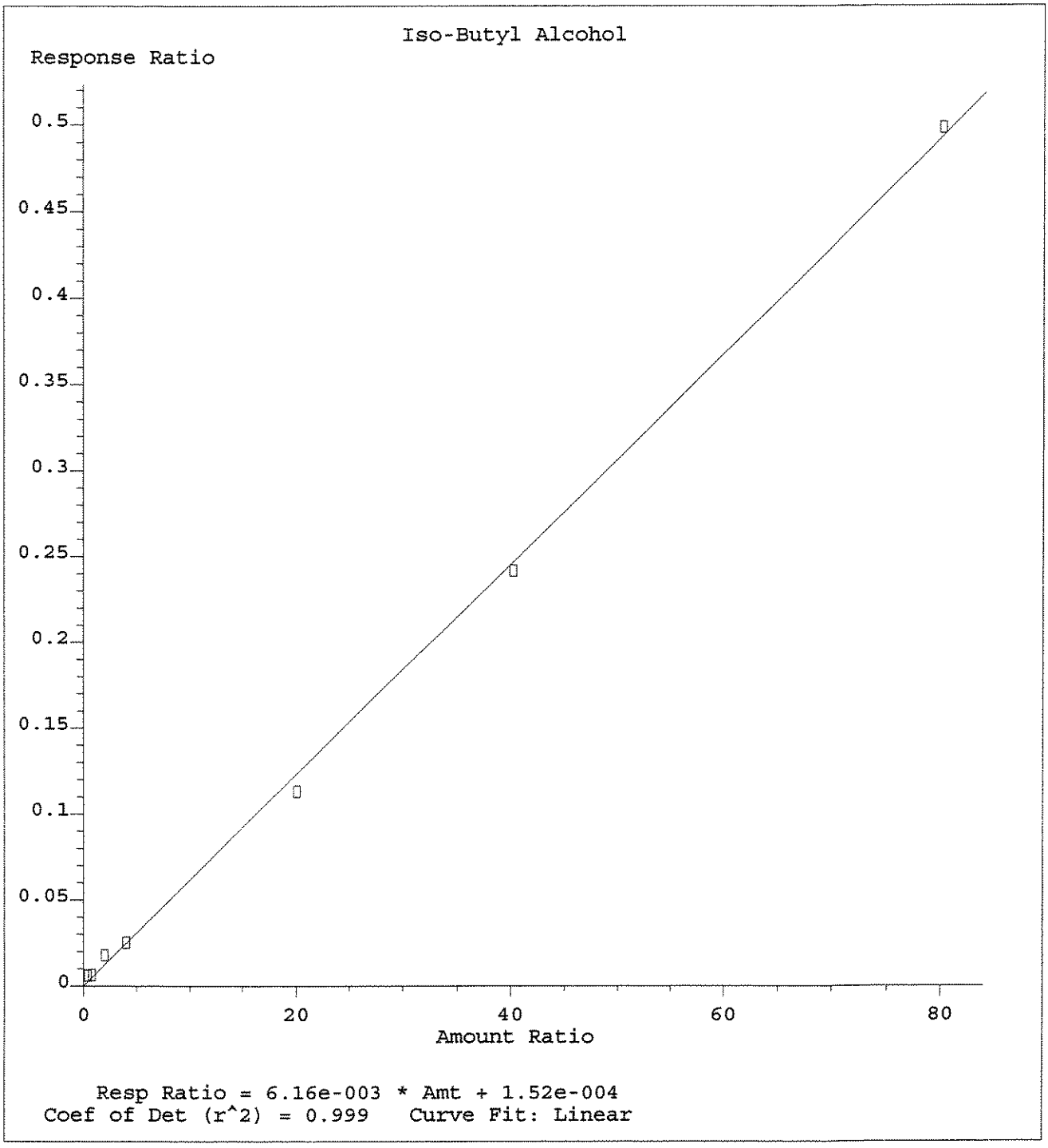
Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Methyl Acetate		0.265	0.007	0.9998	0.331
2-Butanone (MEK)		0.111	0.007	0.9996	0.171
Isobutyl Alcohol		0.006	0.000	0.9990	0.008
n-Heptane		0.562	-0.026	0.9988	0.511
4-Methyl-2-pentanone (MIBK)		0.194	0.001	0.9997	0.213
2-Hexanone		0.128	0.002	0.9998	0.133
Hexachlorobutadiene		0.315	-0.025	0.9952	0.251



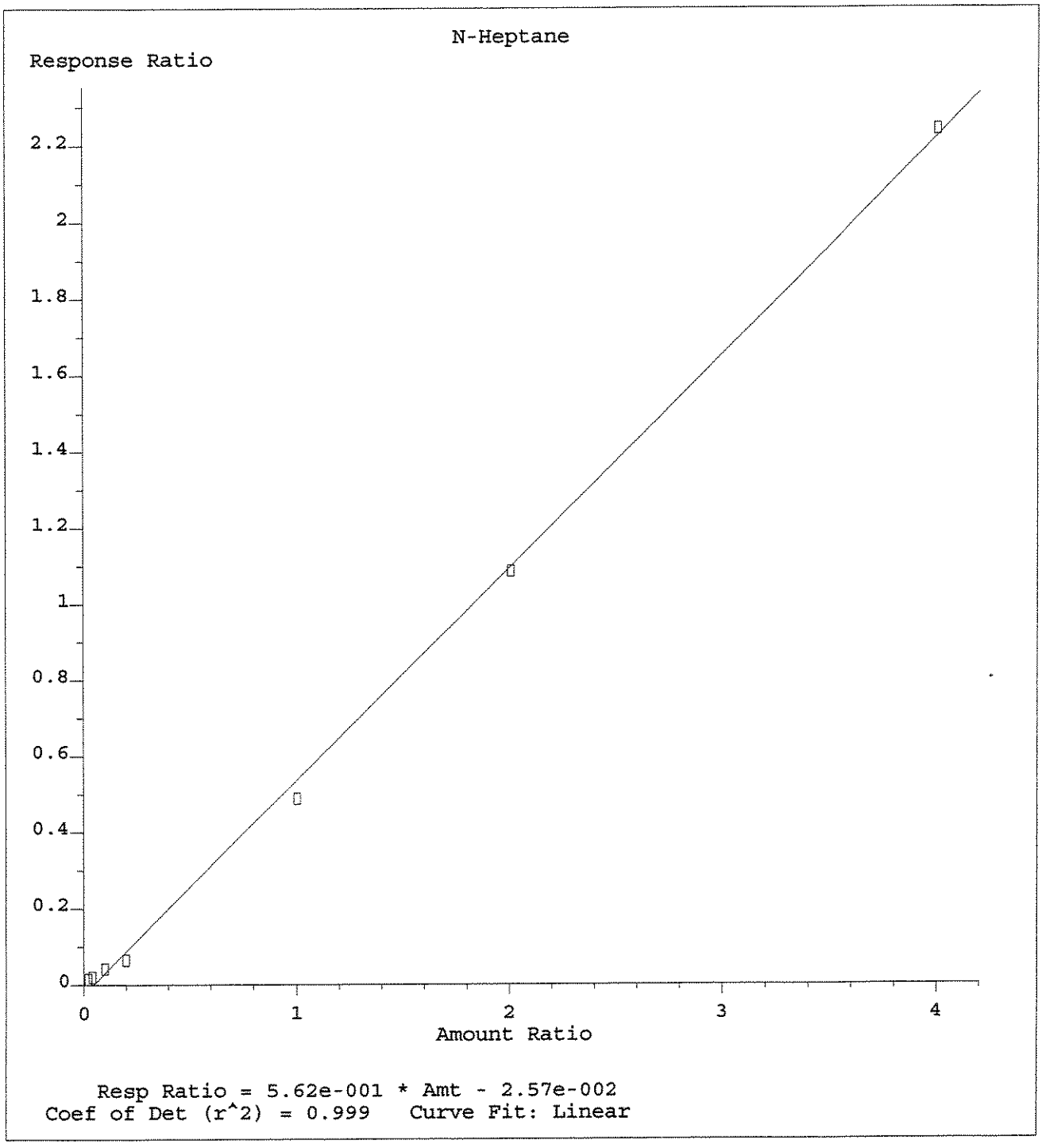
Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 15:59:03 2009



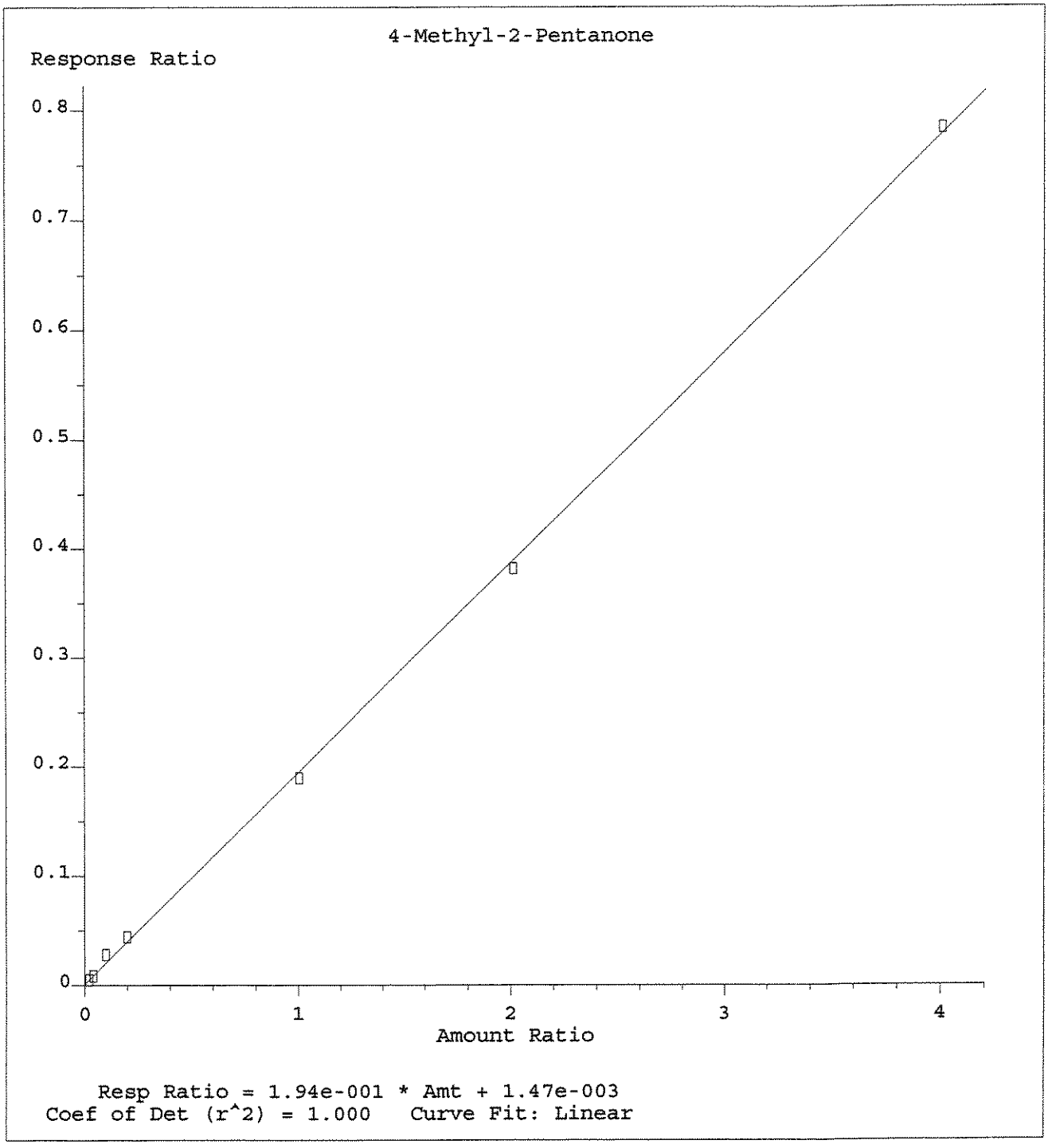
Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 15:59:03 2009



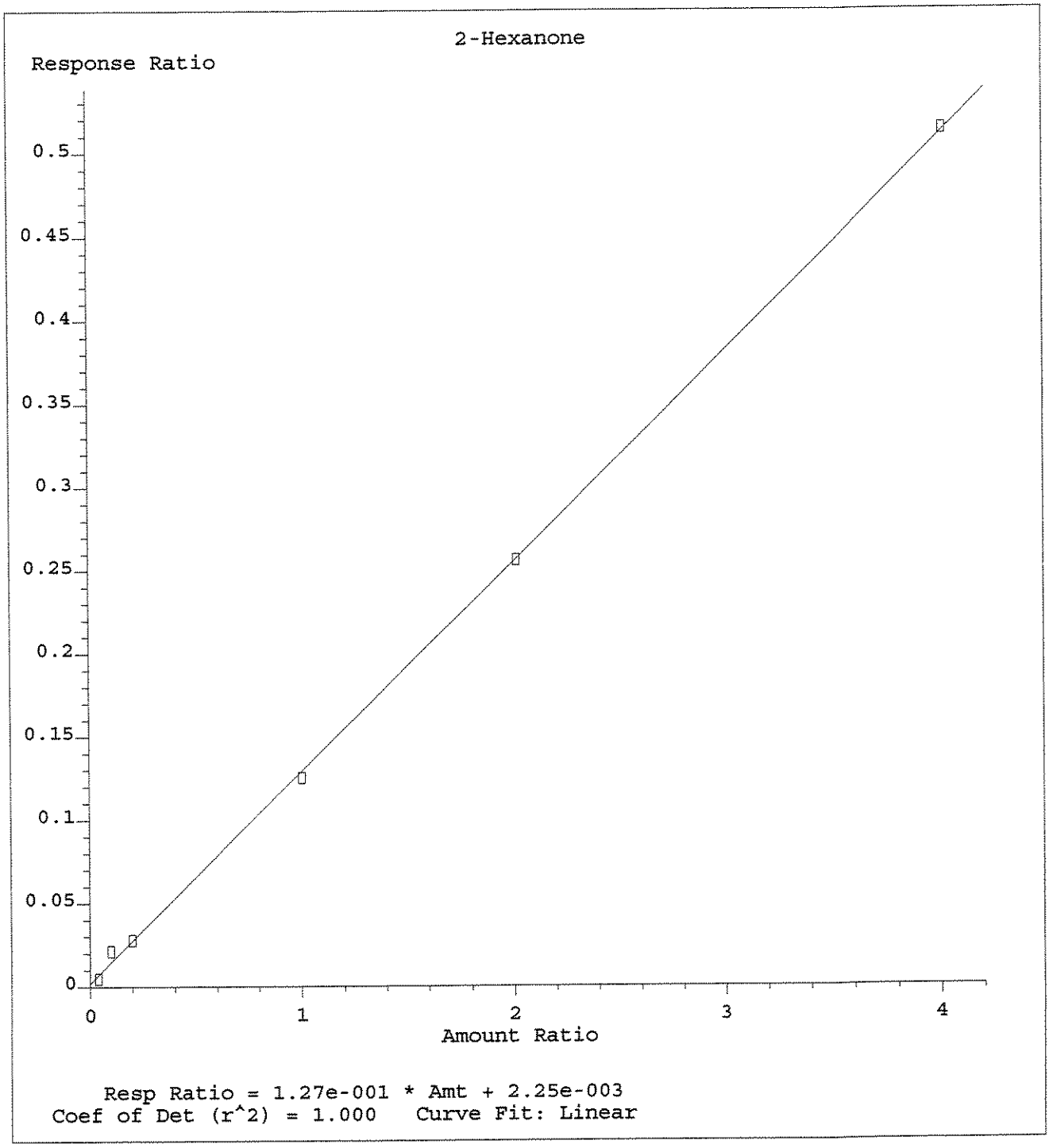
Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 15:59:03 2009



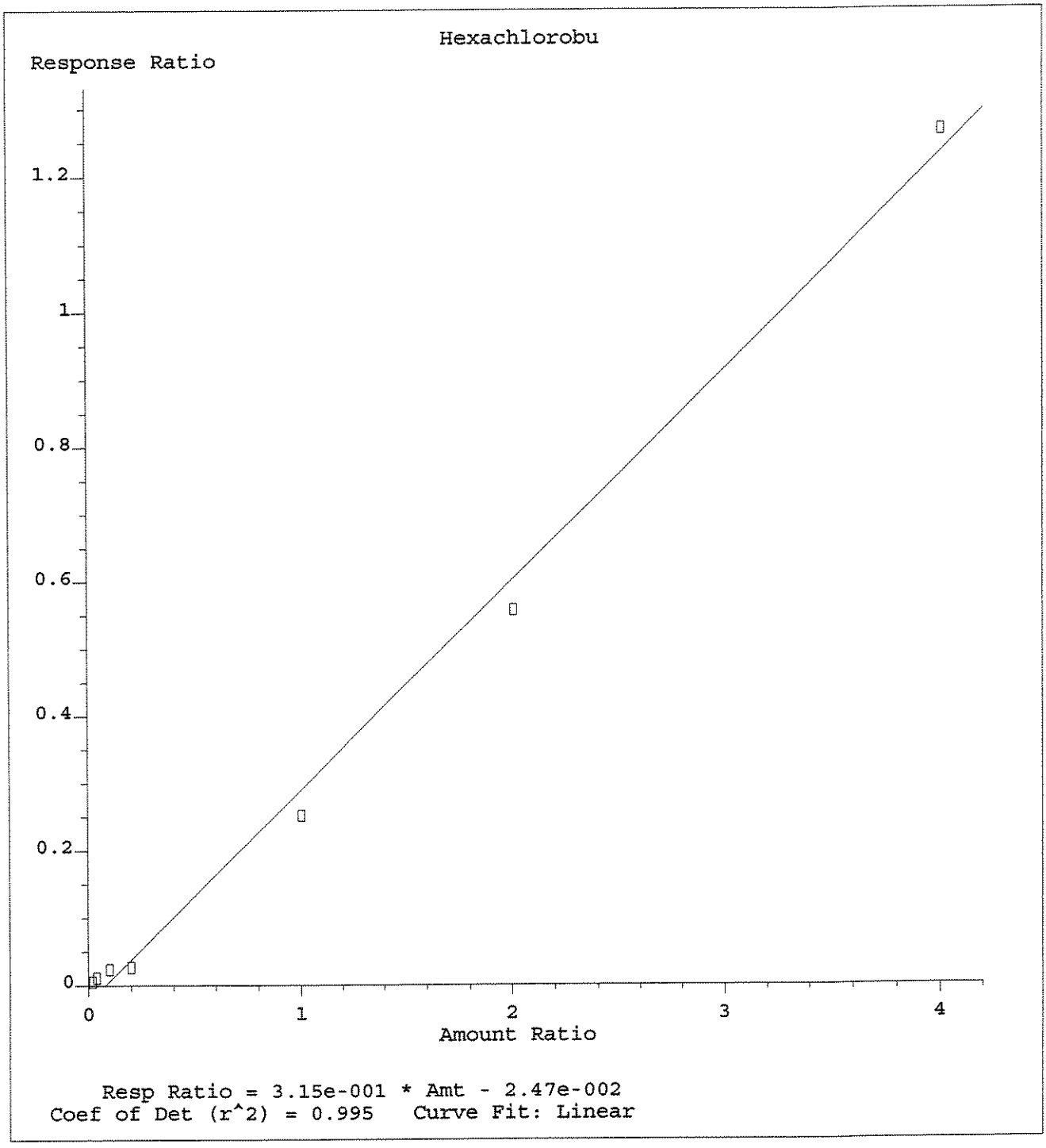
Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 15:59:03 2009



Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 15:59:03 2009



Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 16:00:44 2009



Method Name: J:\ACQUDATA\MSVOA8\METHODS\W071709.M
Calibration Table Last Updated: Fri Jul 17 16:01:06 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:09 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

DC 7.17

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	569941	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	4.00	114	939992	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	776365	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.58	152	333573	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	288242	53.36	ppb		0.00
Spiked Amount 50.000			Recovery = 106.72%				
48) surr1,1,2-Diclethane	3.71	65	270560	59.38	ppb		0.00
Spiked Amount 50.000			Recovery = 118.76%				
69) surr3,Toluene-d8	5.13	98	1090694	58.45	ppb		0.00
Spiked Amount 50.000			Recovery = 116.90%				
70) surr2,bfb	7.45	95	401588	57.97	ppb		0.00
Spiked Amount 50.000			Recovery = 115.94%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	3156m	0.72	ppb		
4) Chloromethane	1.37	50	3879	0.76	ppb	#	60
5) Vinyl Chloride	1.44	62	3335	0.62	ppb	#	84
6) Bromomethane	1.64	96	2057	0.55	ppb		83
7) Chloroethane	1.70	64	2564m	0.60	ppb		
8) FREON 21	1.79	67	5682	0.60	ppb	#	80
9) Trichlorofluoromethane	1.84	101	3035	0.47	ppb		96
10) Diethyl Ether	1.99	59	2130	0.72	ppb		98
11) FREON 123A	1.98	85	1547	0.59	ppb		92
12) FREON 123	2.01	85	2593	0.56	ppb		96
13) Acrolein	2.07	56	1617	6.08	ppb		85
14) FREON 113	2.12	85	776	0.41	ppb		86
15) 1,1-Diclethene	2.13	96	2869	0.67	ppb	#	77
18) Iodomethane	2.24	127	911	0.35	ppb		72
19) Carbon Disulfide	2.28	76	8630	0.60	ppb	#	83
21) Allyl Chloride	2.33	76	1546	0.58	ppb		86
22) Methyl Acetate	2.33	43	2358	0.88	ppb	#	81
23) Methylene Chloride	2.40	84	2771	0.55	ppb	#	85
24) TBA	2.44	59	1872	10.17	ppb	#	1
25) Acrylonitrile	2.54	53	3126	3.51	ppb	#	78
26) Methyl-t-Butyl Ether	2.56	73	5387	0.59	ppb	#	57
27) trans-1,2-Dichloroethene	2.56	96	3036	0.61	ppb		85
28) 1,1-Diclethane	2.82	63	5487	0.66	ppb	#	96
29) DIPE	2.83	45	11187	0.73	ppb		90
30) Vinyl Acetate	2.82	86	442m	0.85	ppb		
31) 2-Chloro-1,3-butadiene	2.87	53	4057	0.64	ppb		93
32) ETBE	3.05	59	7955	0.64	ppb		91
33) 2,2-Dichloropropane	3.18	77	4304	0.65	ppb		98
35) cis-1,2-Dichloroethene	3.17	96	3488	0.64	ppb	#	80
36) Propionitrile	3.21	54	1384	4.98	ppb	#	17
38) Bromochloromethane	3.33	128	1309	0.55	ppb	#	73
39) Chloroform	3.36	83	4807	0.59	ppb		94
41) 1,1,1-Trichloroethane	3.51	97	4038	0.63	ppb	#	13
44) cyclohexane	3.54	56	5664	0.75	ppb		97
45) Carbontetrachloride	3.62	117	3057	0.59	ppb	#	78

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:09 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

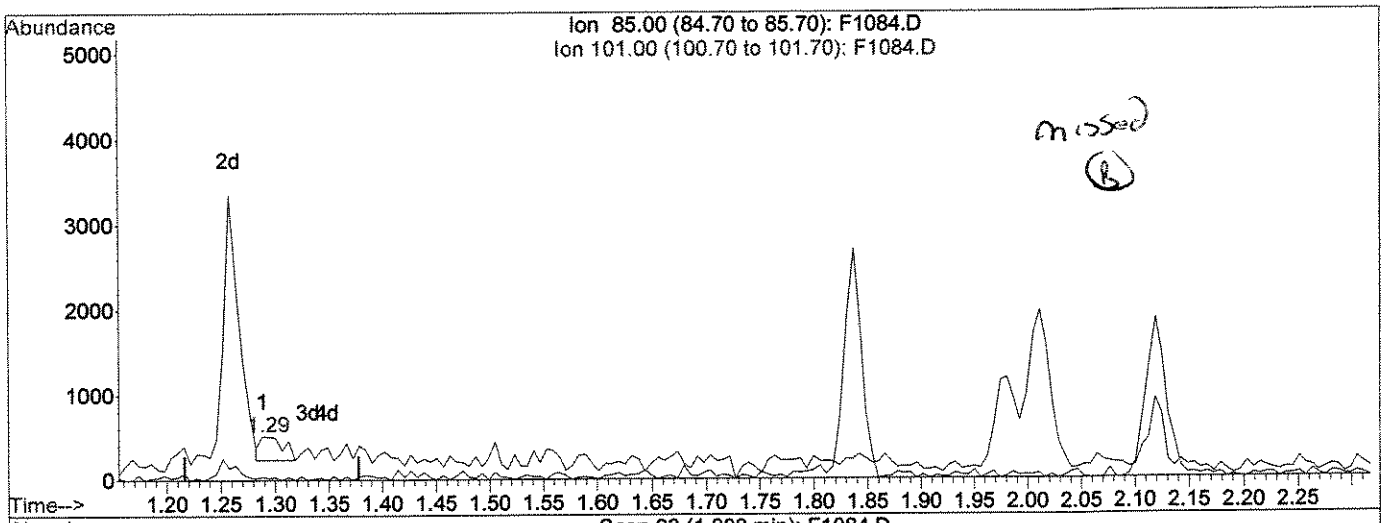
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	1,1-Dichloropropene	3.61	75	3985	0.62	ppb	#	73
49)	Benzene	3.76	78	11753	0.62	ppb		98
50)	1,2-Dichloroethane	3.76	62	2701	0.56	ppb	#	79
51)	TAME	3.81	73	6100	0.62	ppb	#	75
52)	N-Heptane	3.89	43	5258	0.80	ppb		93
53)	Trichloroethene	4.19	95	2553	0.50	ppb	#	89
54)	methylcyclohexane	4.35	55	4385	0.68	ppb		96
55)	1,2-Diclpropane	4.37	63	3320	0.74	ppb		95
56)	Methyl Methacrylate	4.42	69	1326	0.70	ppb	#	69
58)	Dibromomethane	4.46	93	1612	0.69	ppb	#	84
59)	Bromodichloromethane	4.56	83	3393	0.62	ppb	#	83
61)	2-Chloroethylvinyl Ether	4.77	63	1639	0.82	ppb	#	83
62)	cis-1,3-Dichloropropene	4.90	75	4474	0.67	ppb	#	90
65)	Toluene	5.18	91	11604	0.60	ppb		95
66)	trans-1,3-Dichloropropene	5.34	75	3586	0.71	ppb	#	86
67)	Ethyl Methacrylate	5.40	69	2066	0.56	ppb		98
68)	1,1,2-Trichloroethane	5.50	83	1801	0.76	ppb	#	73
71)	Tetrachloroethene	5.64	166	2441	0.50	ppb		99
73)	N-Butyl Acetate	5.80	43	3884	0.94	ppb		95
74)	1,3-Dichloropropane	5.66	76	3667	0.72	ppb		85
75)	Dibromochloromethane	5.86	129	1922	0.57	ppb	#	66
76)	1,2-Dibromoethane	5.97	107	1349	0.47	ppb	#	57
77)	Chlorobenzene	6.40	112	6377	0.52	ppb		97
78)	1,1,1,2-Tetrachloroethane	6.46	131	2067	0.53	ppb	#	82
79)	Ethylbenzene	6.48	91	12434	0.60	ppb		92
80)	(m+p)Xylene	6.58	106	8982	1.11	ppb		99
81)	o-Xylene	6.96	106	4048	0.52	ppb		82
82)	Styrene	6.96	104	6661	0.54	ppb		95
84)	Bromoform	7.16	173	938	0.58	ppb	#	79
85)	Isopropylbenzene	7.30	105	9977	0.53	ppb	#	89
86)	Cyclohexanone	7.41	55	4200	16.34	ppb	#	83
87)	1,1,2,2-Tetrachloroethane	7.58	83	1835	0.59	ppb	#	96
89)	1,2,3-Trichloropropane	7.64	110	646	0.74	ppb		86
90)	n-Propylbenzene	7.69	91	12782	0.58	ppb		98
91)	Bromobenzene	7.61	156	2217	0.50	ppb		89
93)	1,3,5-Trimethylbenzene	7.86	105	8725	0.57	ppb		97
94)	2-Chlorotoluene	7.79	91	7879	0.61	ppb		96
95)	4-Chlorotoluene	7.90	91	8486	0.59	ppb		95
96)	tert-Butylbenzene	8.18	119	7058	0.52	ppb		99
97)	1,2,4-Trimethylbenzene	8.23	105	8360	0.55	ppb		98
98)	sec-Butylbenzene	8.39	105	10443	0.51	ppb	#	90
99)	p-Isopropyltoluene	8.53	119	8421	0.52	ppb	#	88
100)	1,3-Dclbenz	8.52	146	4056	0.51	ppb	#	88
101)	1,4-Dclbenz	8.61	146	4486	0.56	ppb	#	70
103)	n-Butylbenzene	8.95	91	7867	0.57	ppb		95
104)	1,2-Dclbenz	8.98	146	3820	0.54	ppb	#	91
107)	1,2,4-Tcbenzene	10.58	180	2015	0.47	ppb	#	68
108)	Hexachlorobu	10.74	225	1135	0.63	ppb		99
109)	Naphthalen	10.83	128	4539	0.52	ppb		99
110)	1,2,3-Tclbenzene	11.06	180	1766	0.48	ppb		95

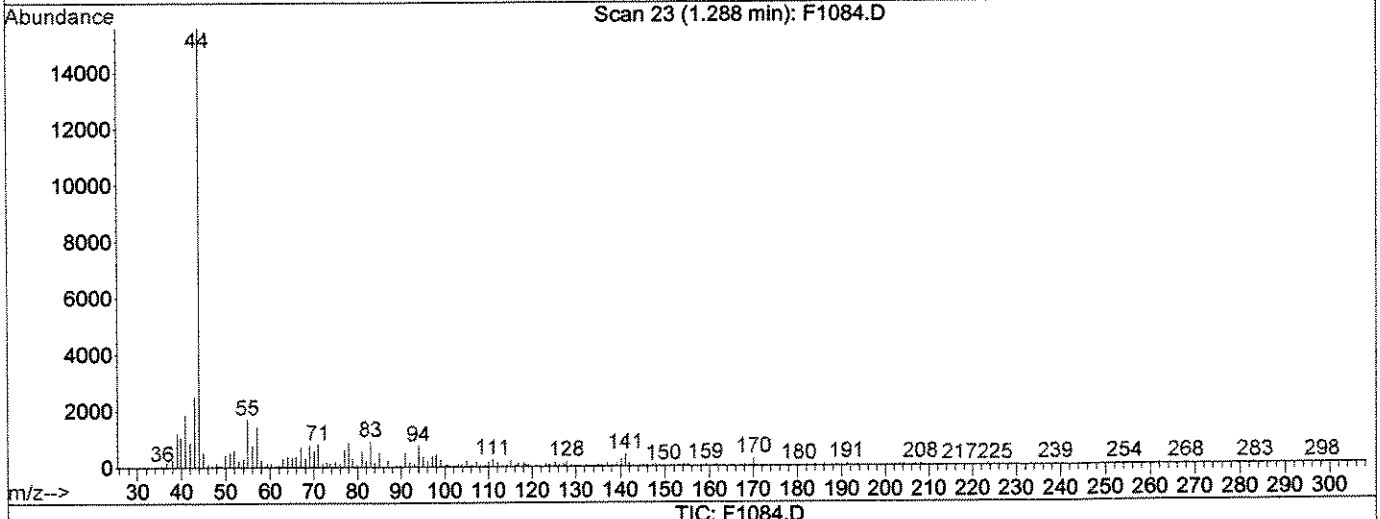
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1084.D

(2) Dichlorodifluoromethane

1.29min 0.09ppb

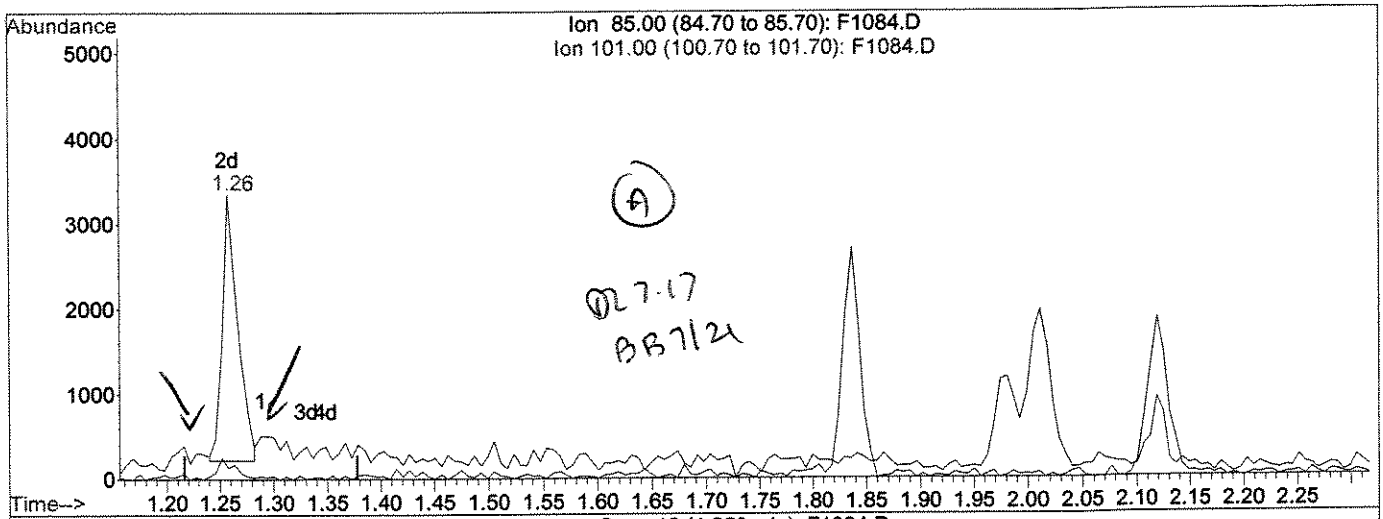
response 413

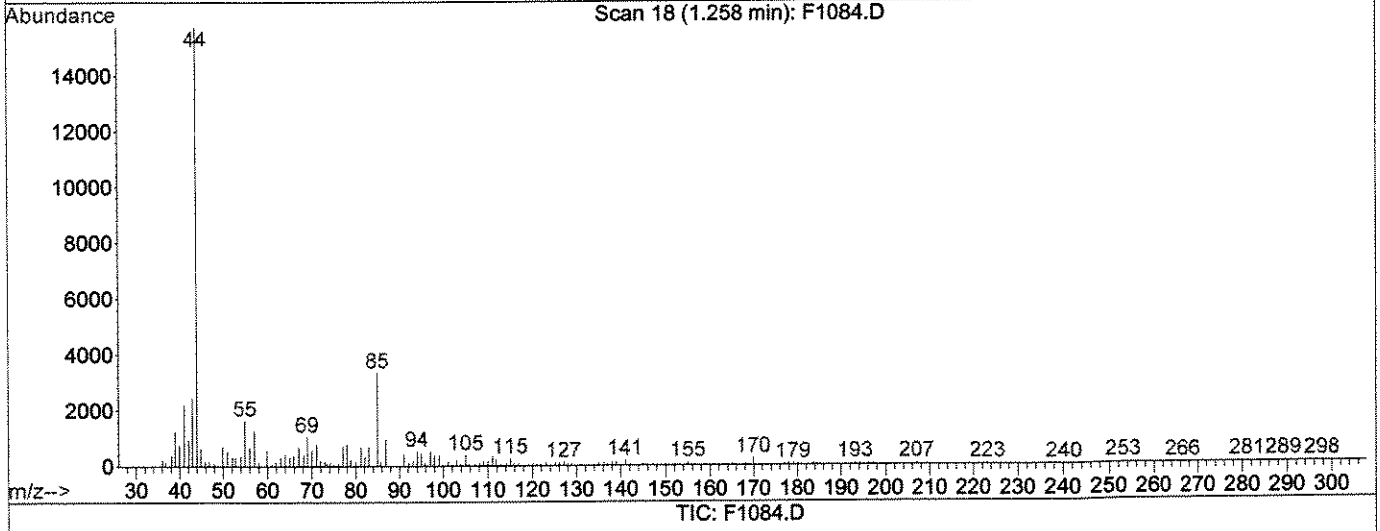
Ion	Exp%	Act%
85.00	100	100
101.00	7.80	7.60
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:05 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1084.D

(2) Dichlorodifluoromethane

1.26min 0.72ppb m

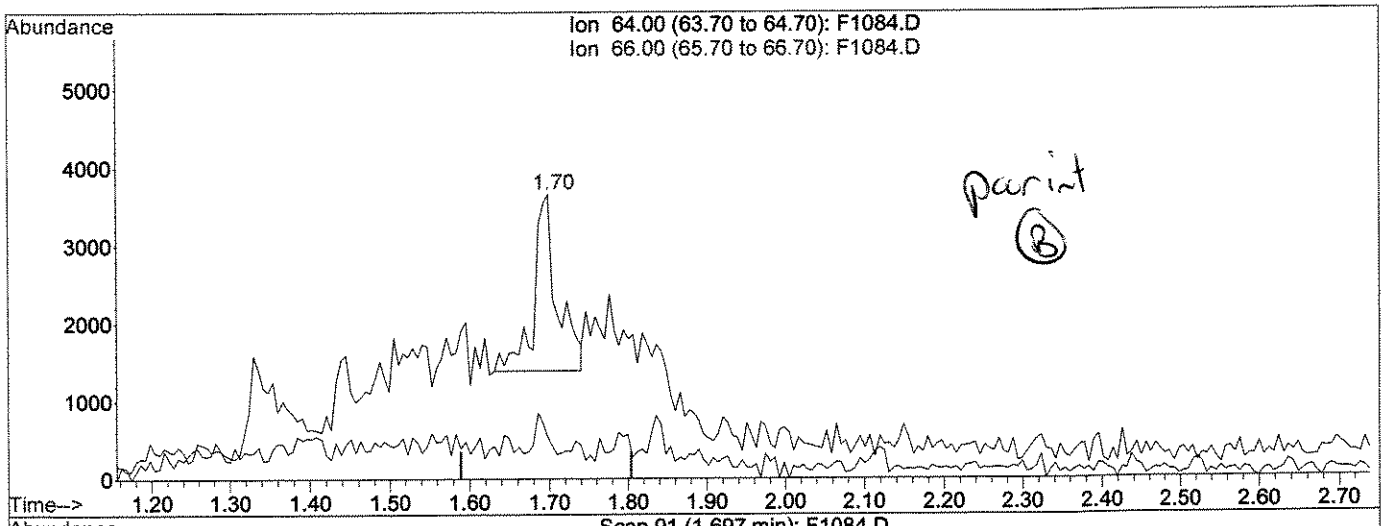
response 3156

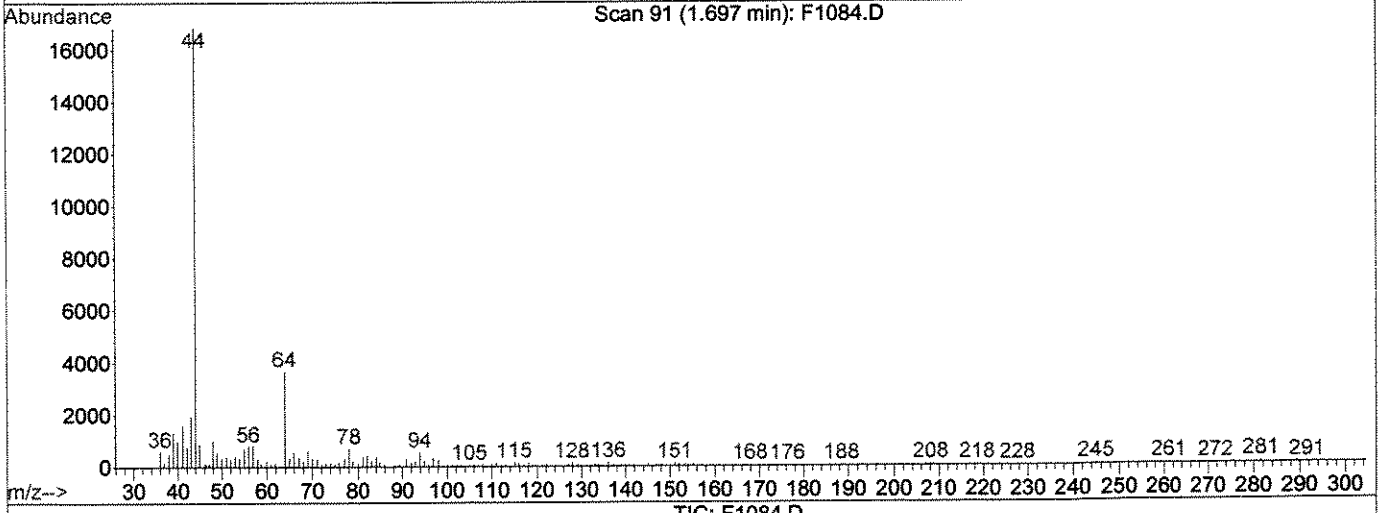
Ion	Exp%	Act%
85.00	100	100
101.00	7.80	4.06#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:05 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1084.D

(7) Chloroethane

1.70min 1.09ppb

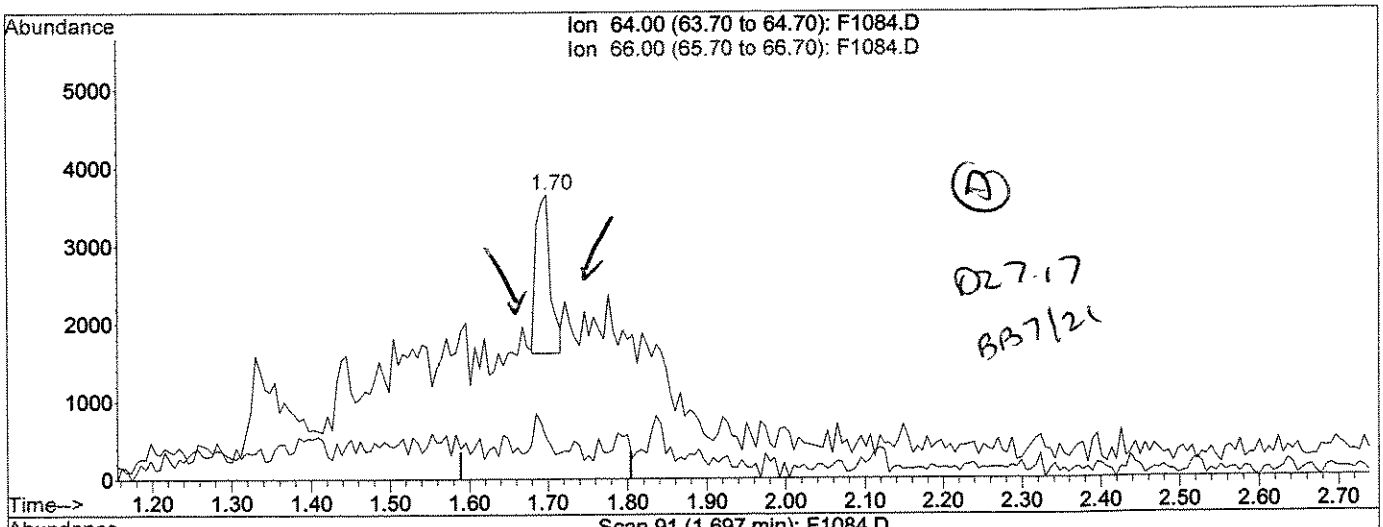
response 4650

Ion	Exp%	Act%
64.00	100	100
66.00	31.70	14.90#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

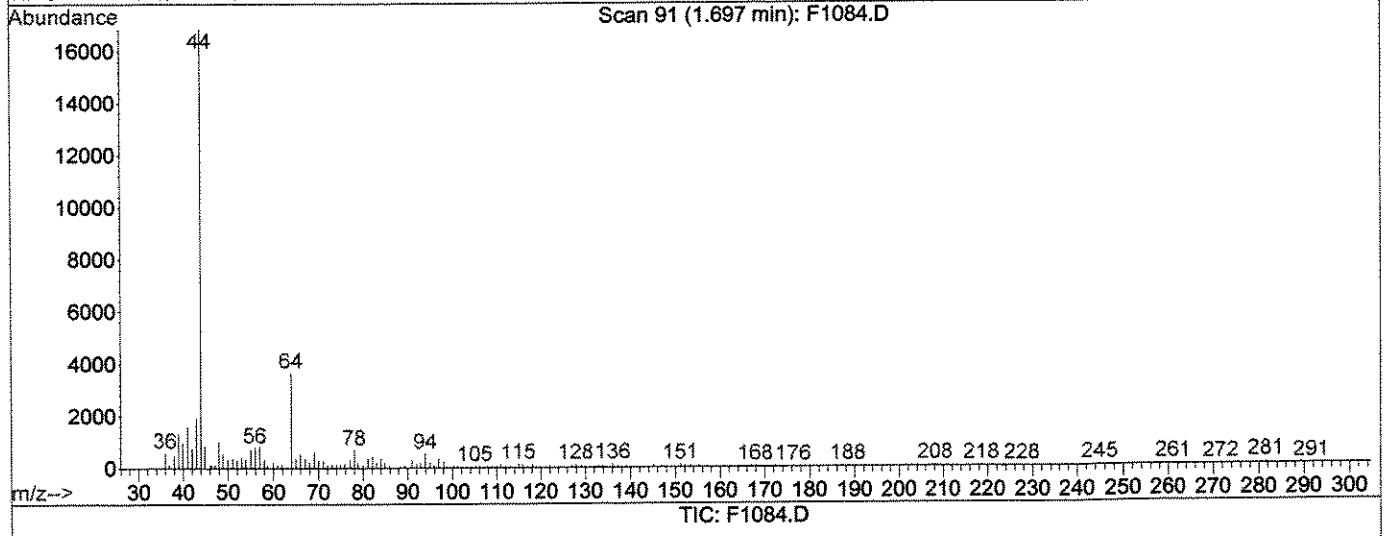
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:05 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration



A

D27.17
BB7/21



TIC: F1084.D

(7) Chloroethane

1.70min 0.60ppb m

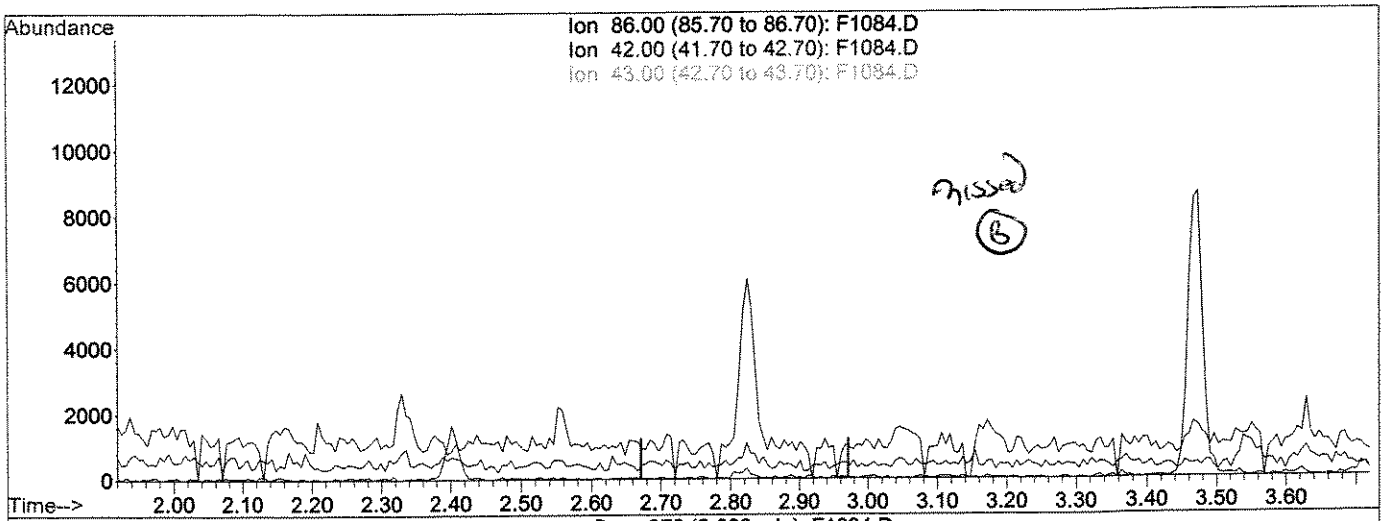
response 2564

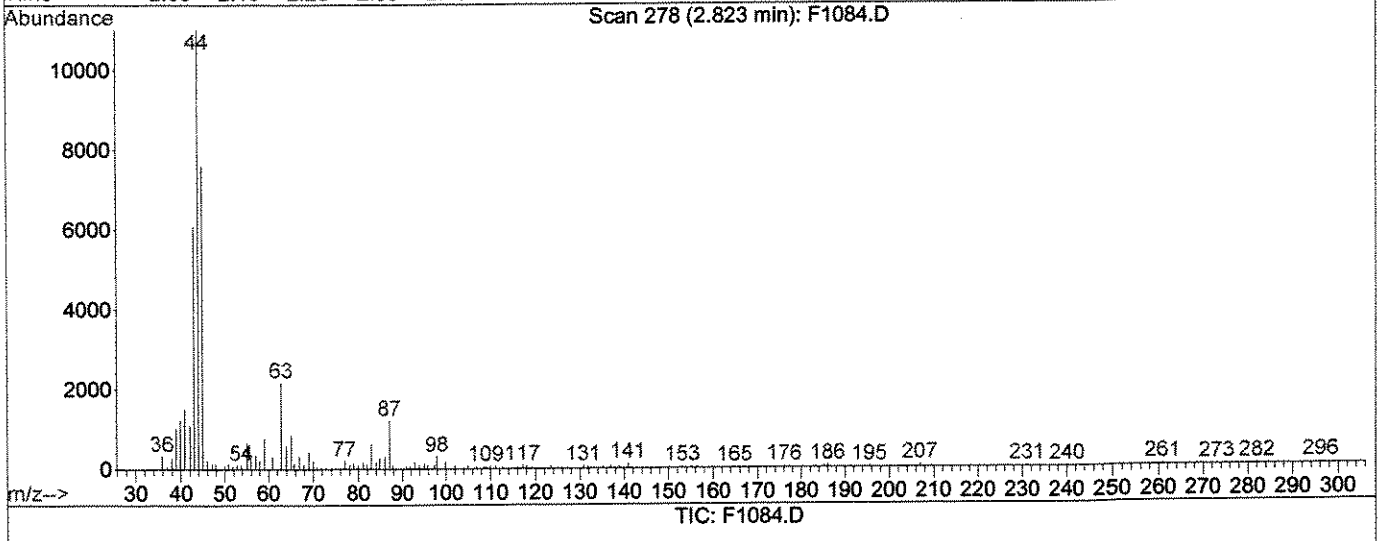
Ion	Exp%	Act%
64.00	100	100
66.00	31.70	14.90#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:06 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1084.D

(30) Vinyl Acetate

2.82min 0.00ppb

response 0

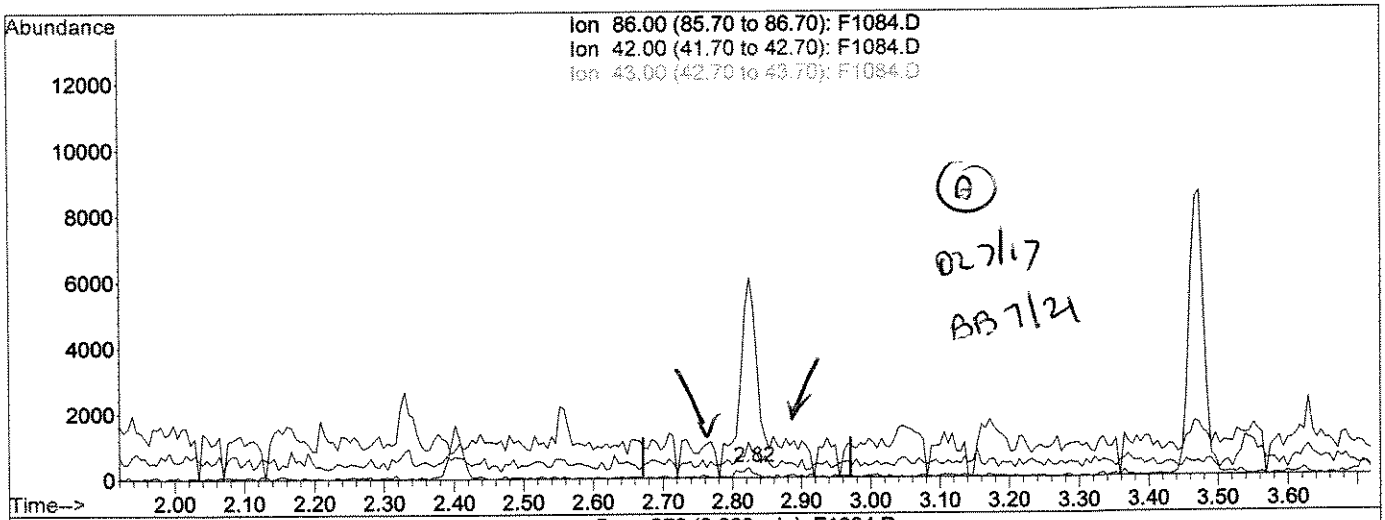
Ion	Exp%	Act%
86.00	100	0.00
42.00	204.70	0.00#
43.00	2194.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

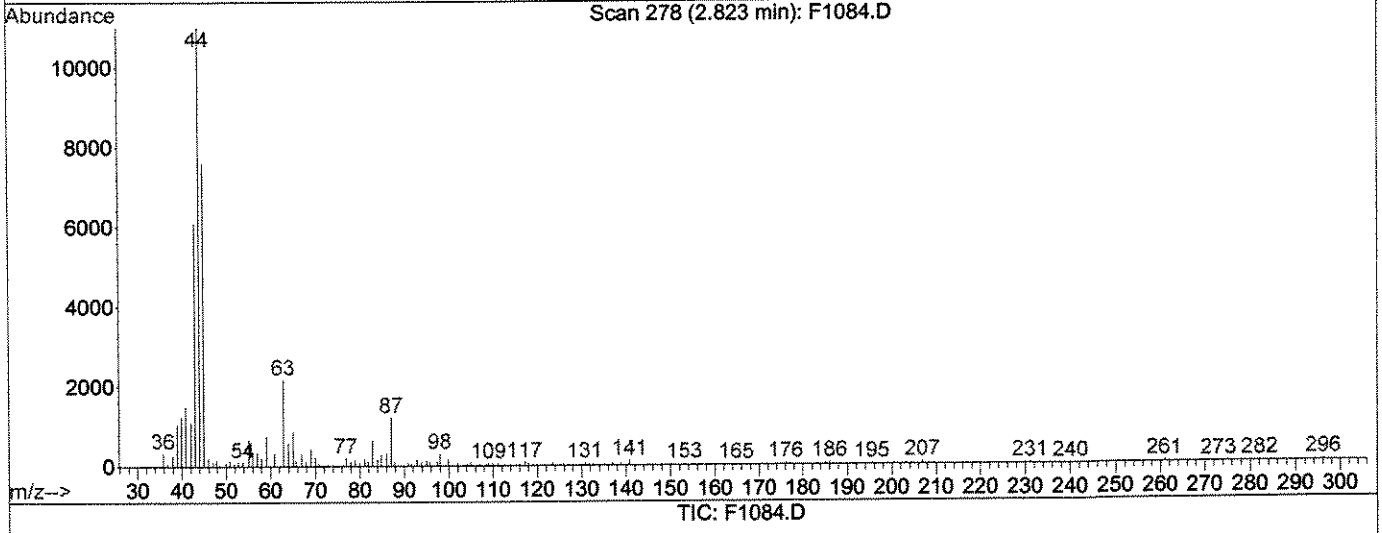
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D
Acq On : 17 Jul 2009 11:09 am
Sample : 0.5 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:06 2009

Vial: 7
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration



(A)
07/17
BB 7/21



TIC: F1084.D

(30) Vinyl Acetate

2.82min 0.85ppb m

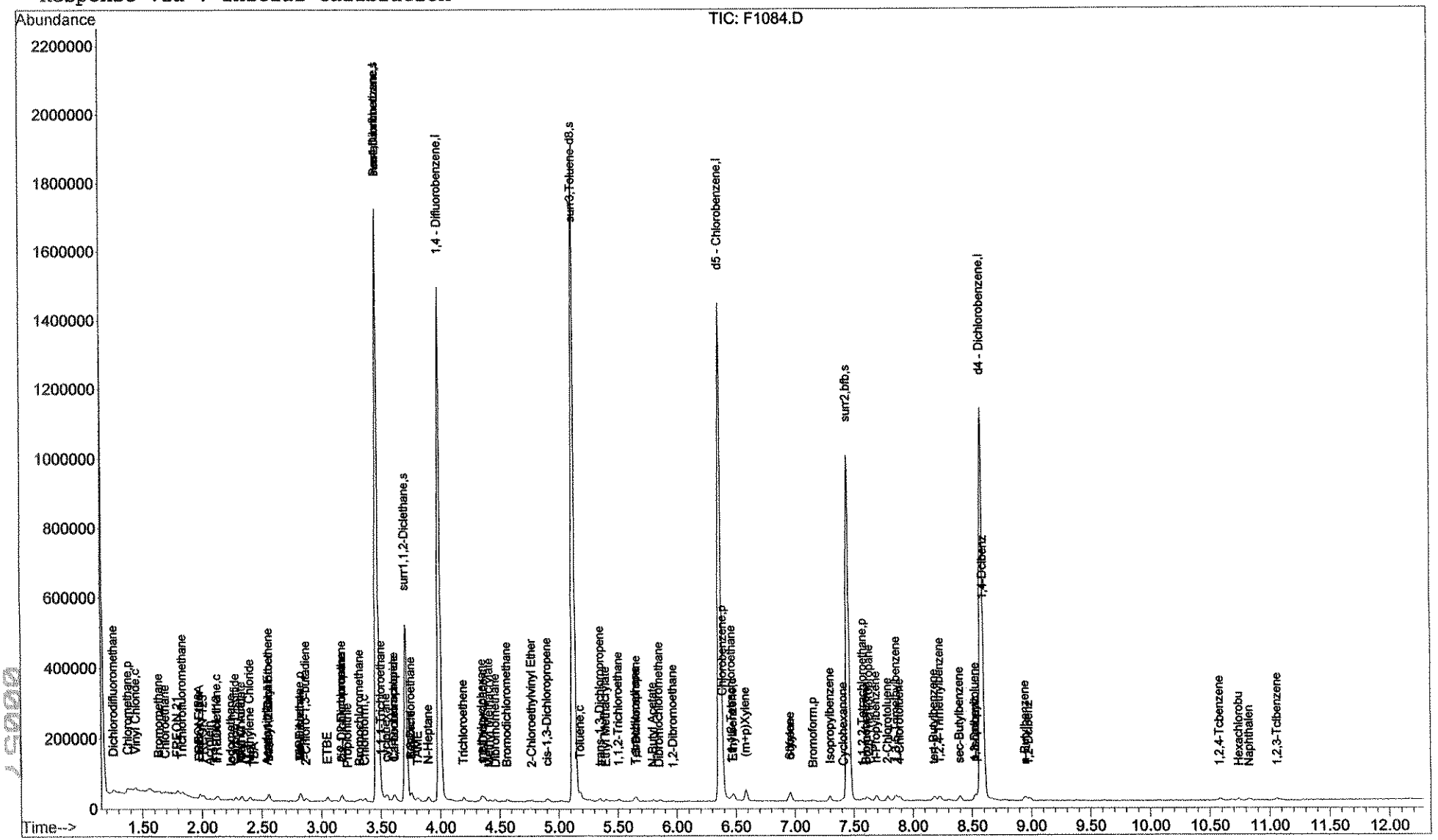
response 442

Ion	Exp%	Act%
86.00	100	100
42.00	204.70	337.77#
43.00	2194.50	1881.11
0.00	0.00	0.00

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1084.D Vial: 7
Acq On : 17 Jul 2009 11:09 am Operator: D.ZIMPFER
Sample : 0.5 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:09 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:50 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

D27.17

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	578704	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	3.99	114	957197	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	797118	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.59	152	336420	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	291240	52.94	ppb		0.00
Spiked Amount 50.000			Recovery = 105.88%				
48) surr1,1,2-Diclethane	3.71	65	272564	58.74	ppb		0.00
Spiked Amount 50.000			Recovery = 117.48%				
69) surr3,Toluene-d8	5.13	98	1116115	58.25	ppb		0.00
Spiked Amount 50.000			Recovery = 116.50%				
70) surr2,bfb	7.45	95	415399	58.40	ppb		0.00
Spiked Amount 50.000			Recovery = 116.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	5516	1.24	ppb		97
4) Chloromethane	1.38	50	7030	1.36	ppb		94
5) Vinyl Chloride	1.44	62	6846	1.25	ppb	#	77
6) Bromomethane	1.64	96	3555	0.93	ppb		97
7) Chloroethane	1.69	64	5096	1.18	ppb		95
8) FREON 21	1.79	67	11110	1.16	ppb	#	78
9) Trichlorofluoromethane	1.83	101	6978	1.06	ppb		96
10) Diethyl Ether	1.99	59	3781	1.26	ppb		85
11) FREON 123A	1.98	85	3107	1.16	ppb		83
12) FREON 123	2.01	85	5010	1.07	ppb		97
13) Acrolein	2.07	56	1718	6.36	ppb		96
14) FREON 113	2.12	85	2188	1.13	ppb		94
15) 1,1-Diclethene	2.13	96	5061	1.16	ppb		91
16) Acetone	2.15	43	2018	1.74	ppb		89
17) 2-Propanol	2.21	45	3044	23.93	ppb	#	32
18) Iodomethane	2.23	127	1801	0.68	ppb		90
19) Carbon Disulfide	2.28	76	16467	1.13	ppb		93
21) Allyl Chloride	2.33	76	3008 QL	1.11	ppb		100
22) Methyl Acetate	2.33	43	3914m	1.43	ppb		
23) Methylene Chloride	2.40	84	5357	1.05	ppb		85
24) TBA	2.44	59	3940	21.08	ppb	#	16
25) Acrylonitrile	2.54	53	5377	5.95	ppb		99
26) Methyl-t-Butyl Ether	2.56	73	10788	1.17	ppb	#	76
27) trans-1,2-Dichloroethene	2.56	96	5901	1.17	ppb		96
28) 1,1-Diclethane	2.81	63	10260	1.21	ppb		96
29) DIPE	2.83	45	22747 Q	1.45	ppb		93
30) Vinyl Acetate	2.81	86	596m	1.13	ppb		
31) 2-Chloro-1,3-butadiene	2.87	53	8179	1.27	ppb		95
32) ETBE	3.05	59	15991	1.27	ppb		95
33) 2,2-Dichloropropane	3.18	77	8574	1.28	ppb		97
35) cis-1,2-Dichloroethene	3.17	96	6364	1.15	ppb		97
36) Propionitrile	3.21	54	1889	6.69	ppb	#	1
37) Methacrylonitrile	3.31	67	1432	1.30	ppb		100
38) Bromochloromethane	3.33	128	2458	1.02	ppb		86
39) Chloroform	3.37	83	10134	1.23	ppb		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:50 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40) Tetrahydrofuran	3.37	42	992m	1.29	ppb		
41) 1,1,1-Trichloroethane	3.51	97	7789	1.19	ppb	#	52
44) cyclohexane	3.55	56	10805	1.40	ppb		99
45) Carbontetrachloride	3.62	117	6522	1.24	ppb		90
46) 1,1-Dichloropropene	3.61	75	8443	1.30	ppb		94
47) Iso-Butyl Alcohol	3.63	43	5868	64.25	ppb		90
49) Benzene	3.76	78	23288	1.21	ppb		91
50) 1,2-Dichloroethane	3.77	62	5424	1.10	ppb	#	91
51) TAME	3.81	73	12172	1.21	ppb	#	88
52) N-Heptane	3.90	43	14193	2.12	ppb		94
53) Trichloroethene	4.20	95	5768	1.12	ppb		97
54) methylcyclohexane	4.35	55	9145	1.39	ppb		97
55) 1,2-Diclpropane	4.37	63	5617	1.23	ppb		82
56) Methyl Methacrylate	4.42	69	2565	1.34	ppb		93
57) 1,4-Dioxane	4.46	88	487	24.05	ppb		82
58) Dibromomethane	4.46	93	2930	1.23	ppb		95
59) Bromodichloromethane	4.56	83	7096	1.26	ppb	#	90
61) 2-Chloroethylvinyl Ether	4.77	63	2682	1.32	ppb		96
62) cis-1,3-Dichloropropene	4.90	75	8593	1.26	ppb		99
64) 4-Methyl-2-Pentanone	5.01	43	3911m	1.62	ppb		
65) Toluene	5.19	91	23179	1.17	ppb		94
66) trans-1,3-Dichloropropene	5.35	75	6625	1.28	ppb		94
67) Ethyl Methacrylate	5.40	69	5067	1.34	ppb		93
68) 1,1,2-Trichloroethane	5.50	83	2684	1.10	ppb	#	81
71) Tetrachloroethene	5.64	166	4898	0.99	ppb	#	92
73) N-Butyl Acetate	5.79	43	7349m	1.72	ppb		
74) 1,3-Dichloropropane	5.66	76	6088	1.16	ppb		92
75) Dibromochloromethane	5.85	129	3544	1.02	ppb		92
76) 1,2-Dibromoethane	5.97	107	3081	1.04	ppb		86
77) Chlorobenzene	6.40	112	13363	1.06	ppb		93
78) 1,1,1,2-Tetrachloroethane	6.46	131	4064	1.01	ppb	#	81
79) Ethylbenzene	6.48	91	25130	1.18	ppb		99
80) (m+p)Xylene	6.58	106	17530	2.11	ppb		99
81) o-Xylene	6.95	106	8125	1.02	ppb		95
82) Styrene	6.97	104	13352	1.05	ppb		97
84) Bromoform	7.16	173	1743	1.07	ppb	#	78
85) Isopropylbenzene	7.30	105	21253	1.12	ppb		99
86) Cyclohexanone	7.41	55	7910	30.52	ppb		87
87) 1,1,2,2-Tetrachloroethane	7.57	83	3481	1.12	ppb		99
88) Trans-1,4-Dichloro-2-buten	7.63	53	638	1.11	ppb		80
89) 1,2,3-Trichloropropane	7.63	110	1124	1.27	ppb		90
90) n-Propylbenzene	7.69	91	26672	1.20	ppb		98
91) Bromobenzene	7.61	156	4717	1.06	ppb		93
93) 1,3,5-Trimethylbenzene	7.86	105	17565	1.14	ppb		100
94) 2-Chlorotoluene	7.79	91	15561	1.19	ppb		94
95) 4-Chlorotoluene	7.89	91	17340	1.19	ppb		98
96) tert-Butylbenzene	8.18	119	15036	1.11	ppb		92
97) 1,2,4-Trimethylbenzene	8.22	105	16873	1.11	ppb		95
98) sec-Butylbenzene	8.40	105	21703	1.06	ppb		99
99) p-Isopropyltoluene	8.54	119	17230	1.06	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:50 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

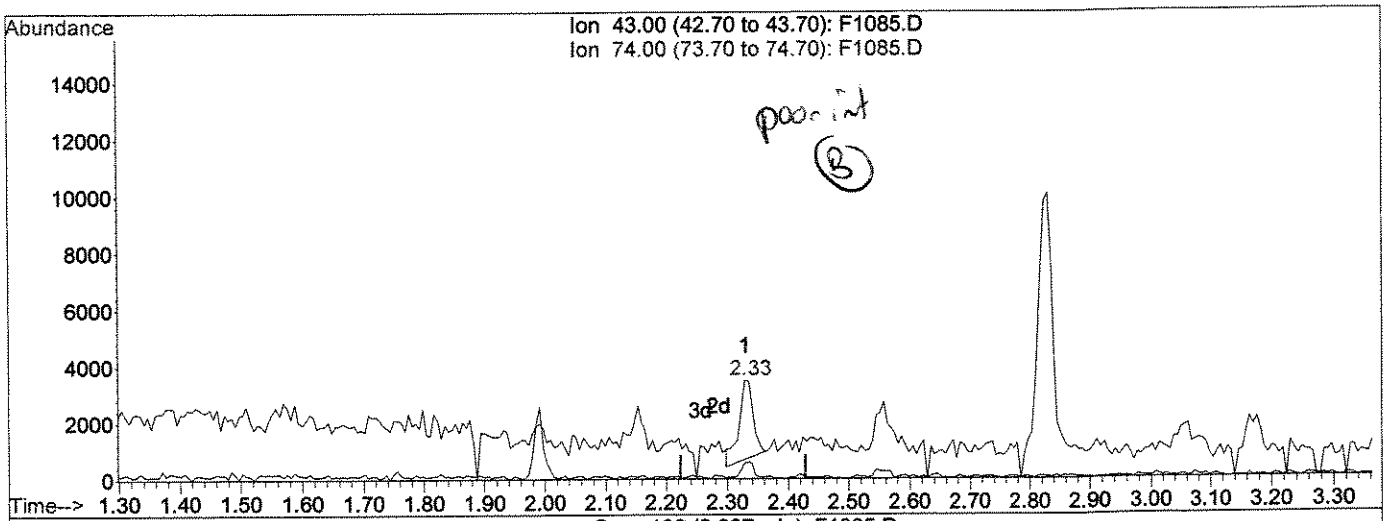
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
100) 1,3-Dclbenz	8.52	146	8486	1.05	ppb		99
101) 1,4-Dclbenz	8.60	146	7978	0.98	ppb		96
103) n-Butylbenzene	8.95	91	16086	1.15	ppb		91
104) 1,2-Dclbenz	8.99	146	7469	1.04	ppb	#	86
105) 1,2-Dibromo-3-chloropropan	9.76	157	538	1.01	ppb	#	74
107) 1,2,4-Tcbenzene	10.58	180	3787	0.88	ppb		98
108) Hexachlorobu	10.75	225	1718	0.94	ppb	#	89
109) Naphthalen	10.83	128	8027	0.91	ppb	#	90
110) 1,2,3-Tclbenzene	11.07	180	3457	0.92	ppb		95

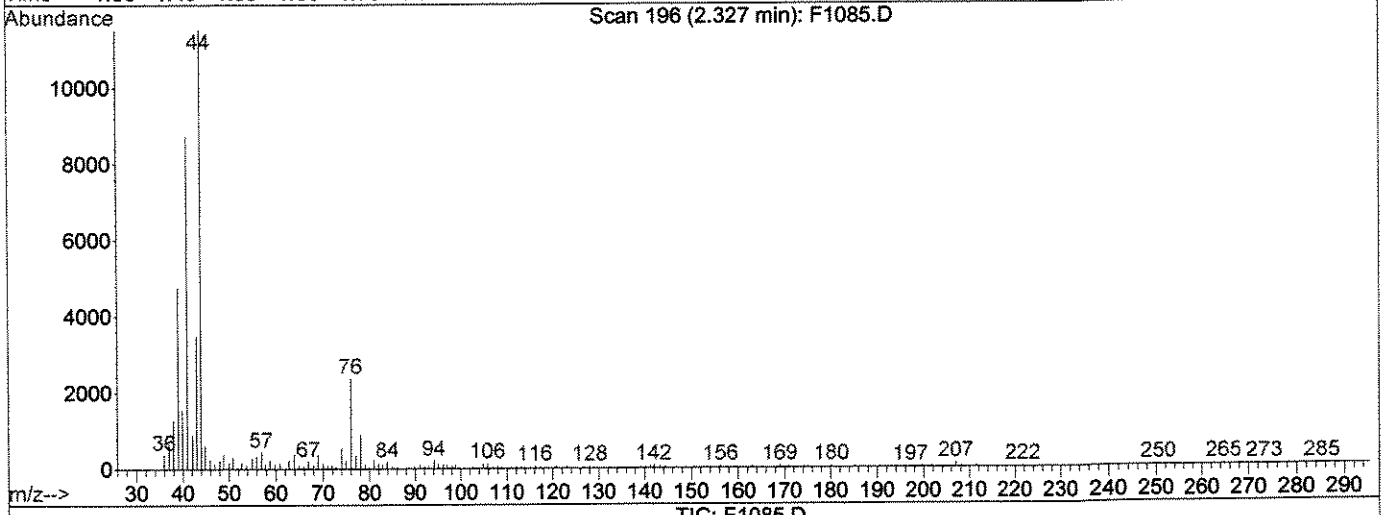
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:11 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(22) Methyl Acetate

2.33min 1.66ppb

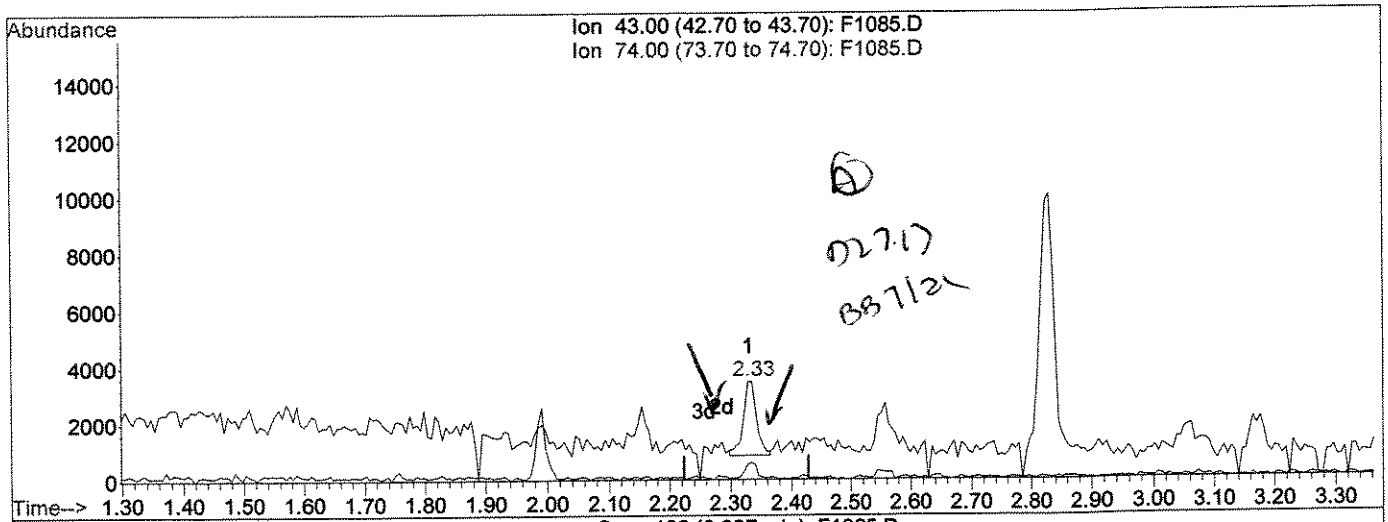
response 4523

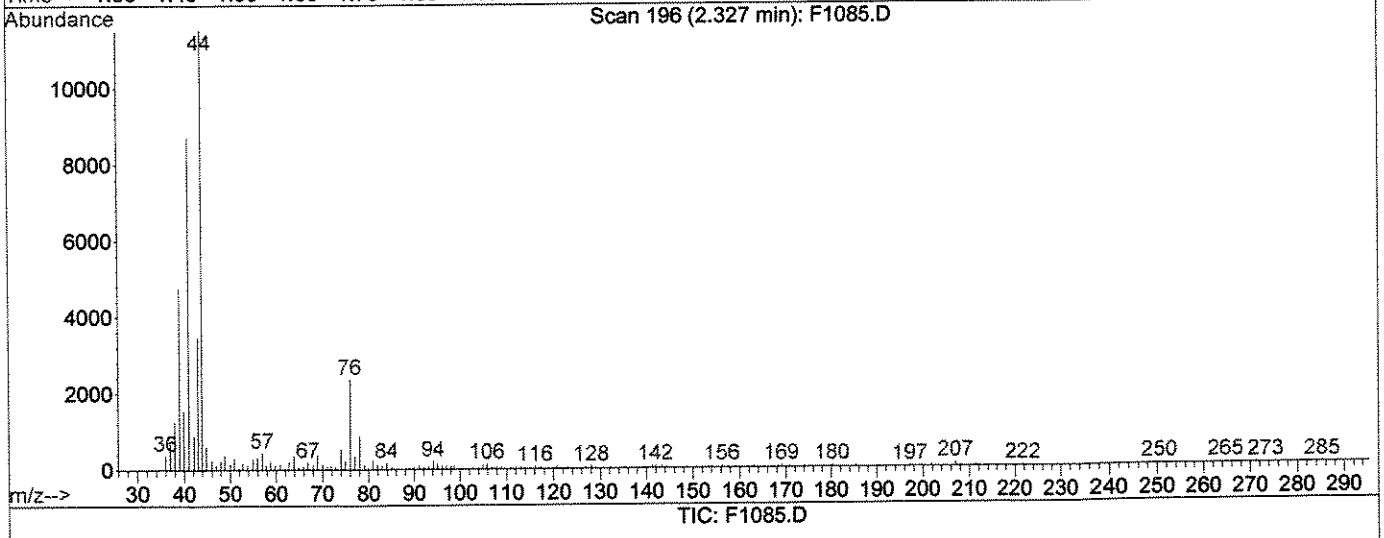
Ion	Exp%	Act%
43.00	100	100
74.00	20.20	15.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:11 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(22) Methyl Acetate

2.33min 1.43ppb m

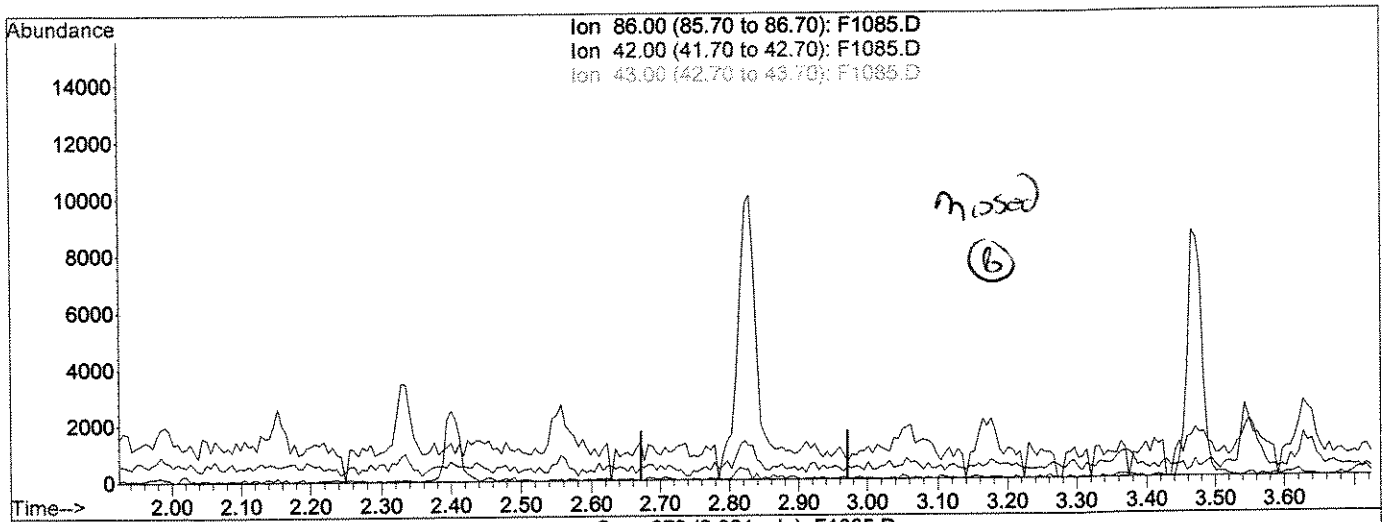
response 3914

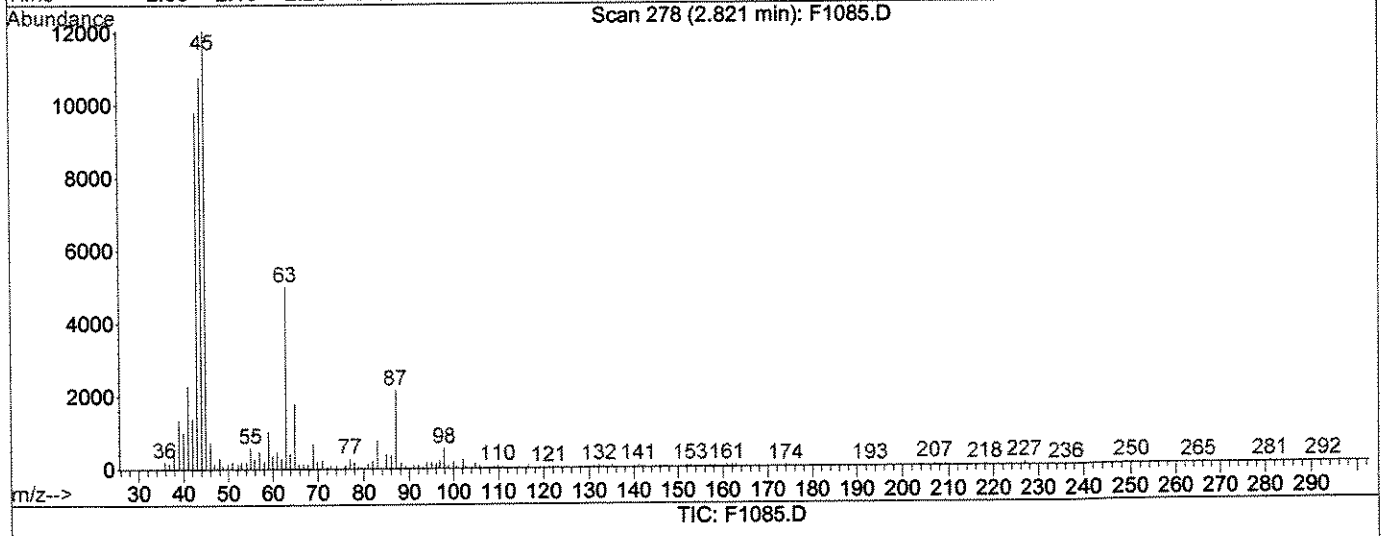
Ion	Exp%	Act%
43.00	100	100
74.00	20.20	15.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:11 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(30) Vinyl Acetate

2.82min 0.00ppb

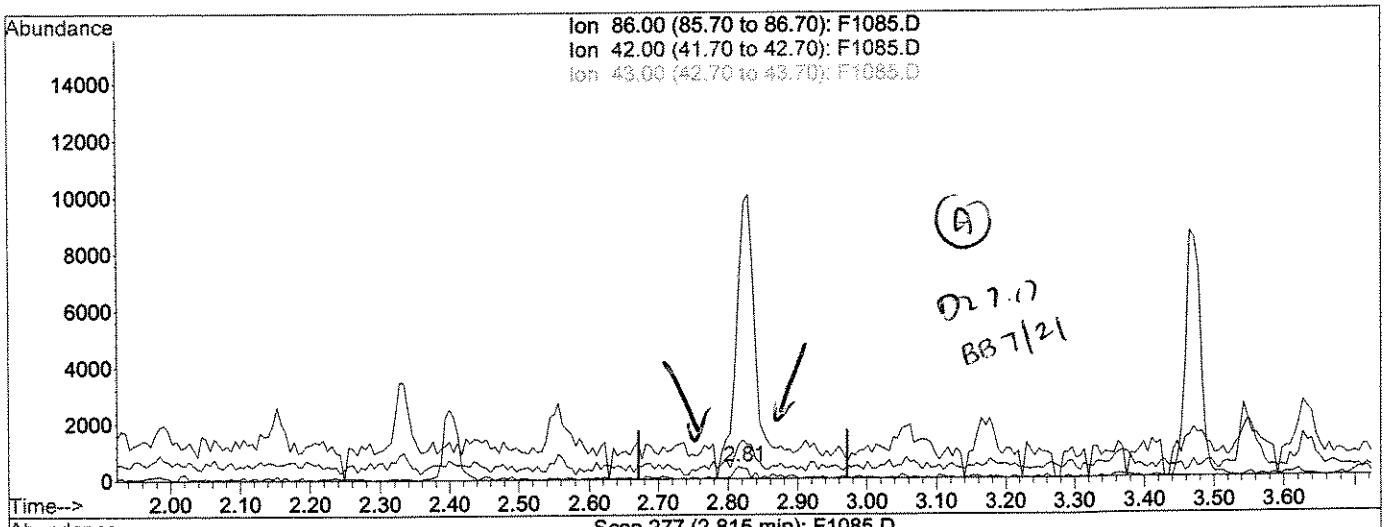
response 0

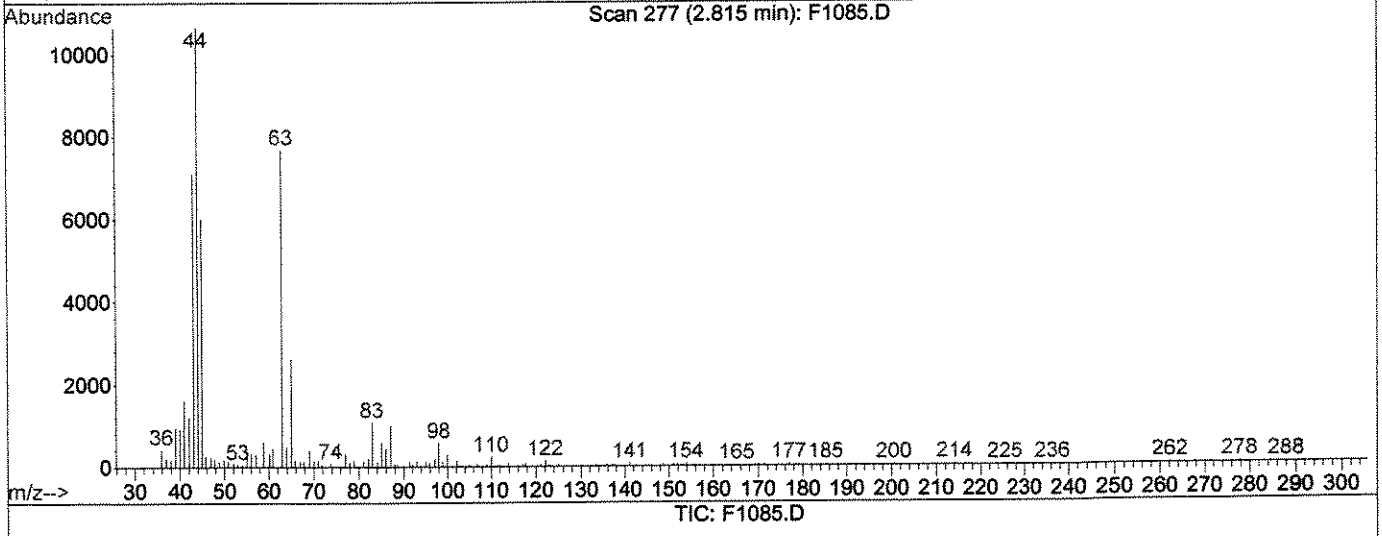
Ion	Exp%	Act%
86.00	100	0.00
42.00	204.70	0.00#
43.00	2194.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:11 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(30) Vinyl Acetate

2.81min 1.13ppb m

response 596

Ion	Exp%	Act%
86.00	100	100
42.00	204.70	270.98#
43.00	2194.50	1608.16#
0.00	0.00	0.00

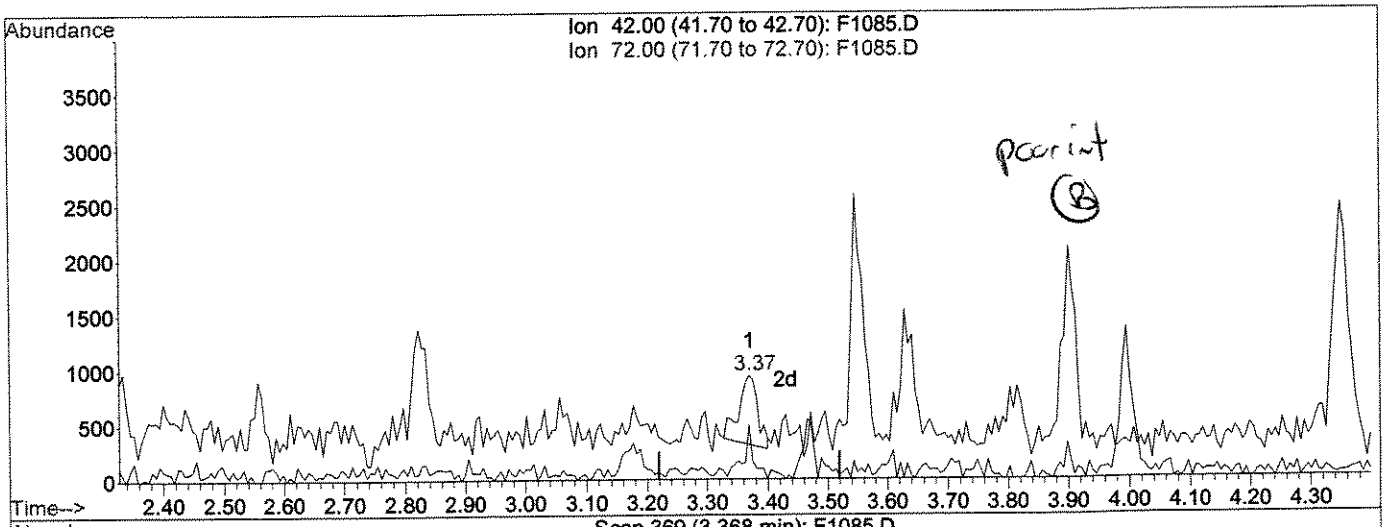
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D
Acq On : 17 Jul 2009 11:38 am
Sample : 1.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:12 2009

Vial: 8
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration



TIC: F1085.D

(40) Tetrahydrofuran

3.37min 1.76ppb

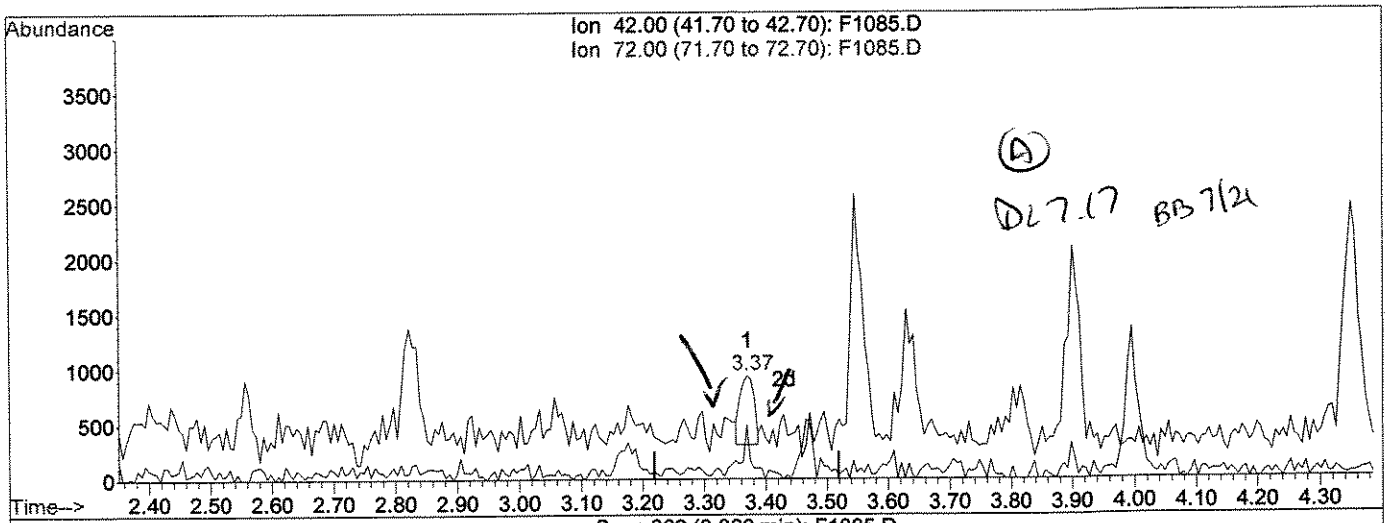
response 1354

Ion	Exp%	Act%
42.00	100	100
72.00	39.80	50.37
0.00	0.00	0.00
0.00	0.00	0.00

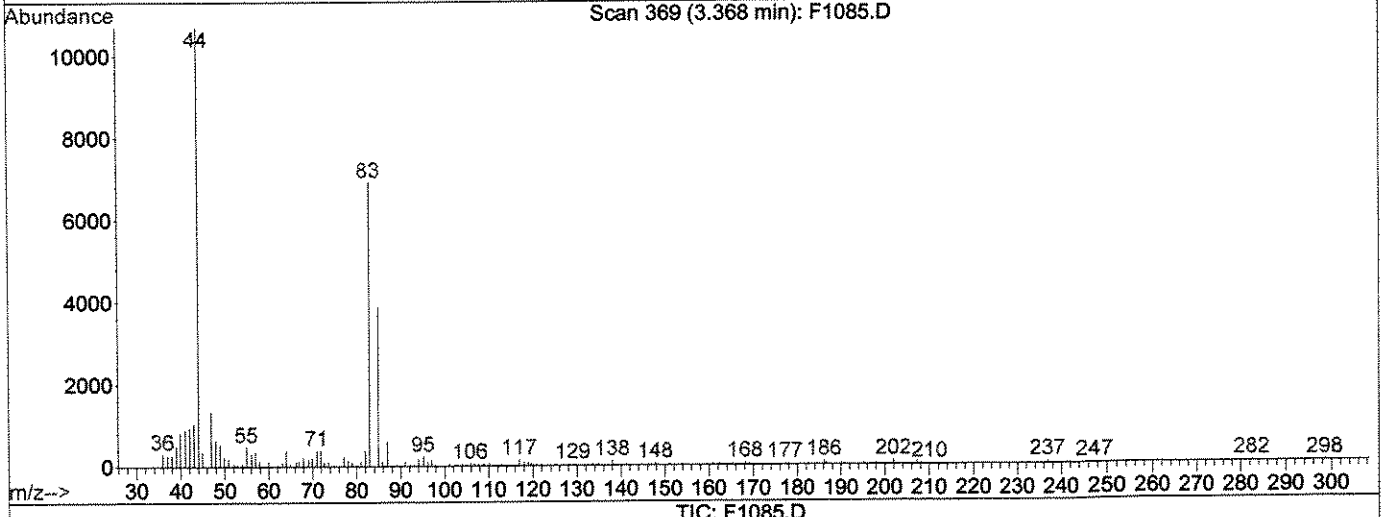
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:24 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:19:27 2009
Response via : Multiple Level Calibration



(A)
DL 7.17 BB 7/21



TIC: F1085.D

(40) Tetrahydrofuran

3.37min 1.29ppb m

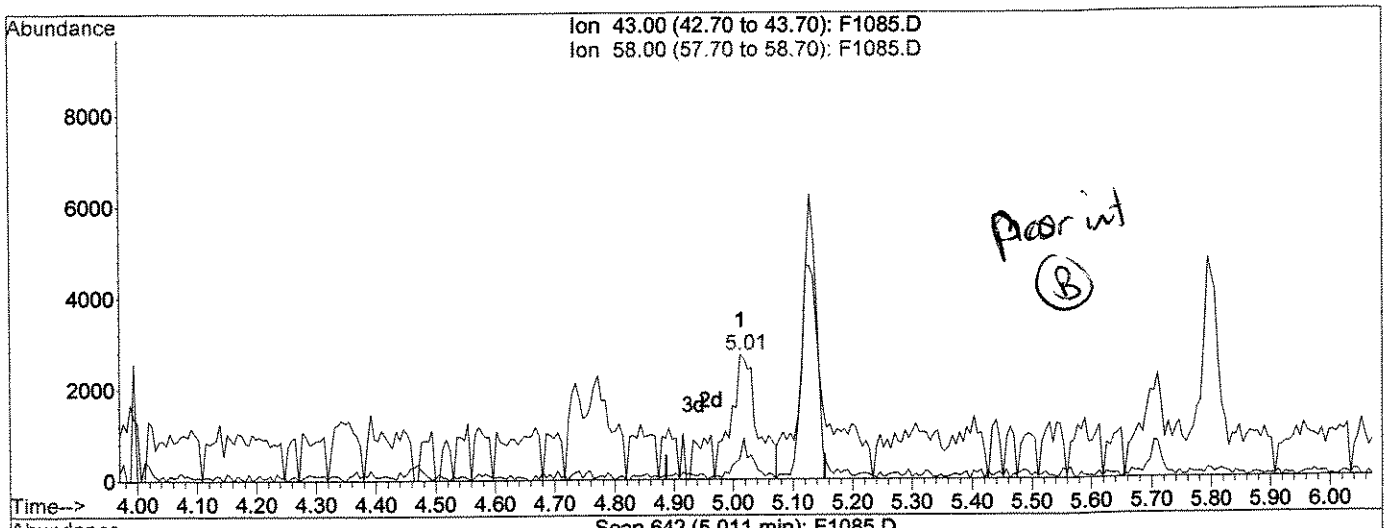
response 992

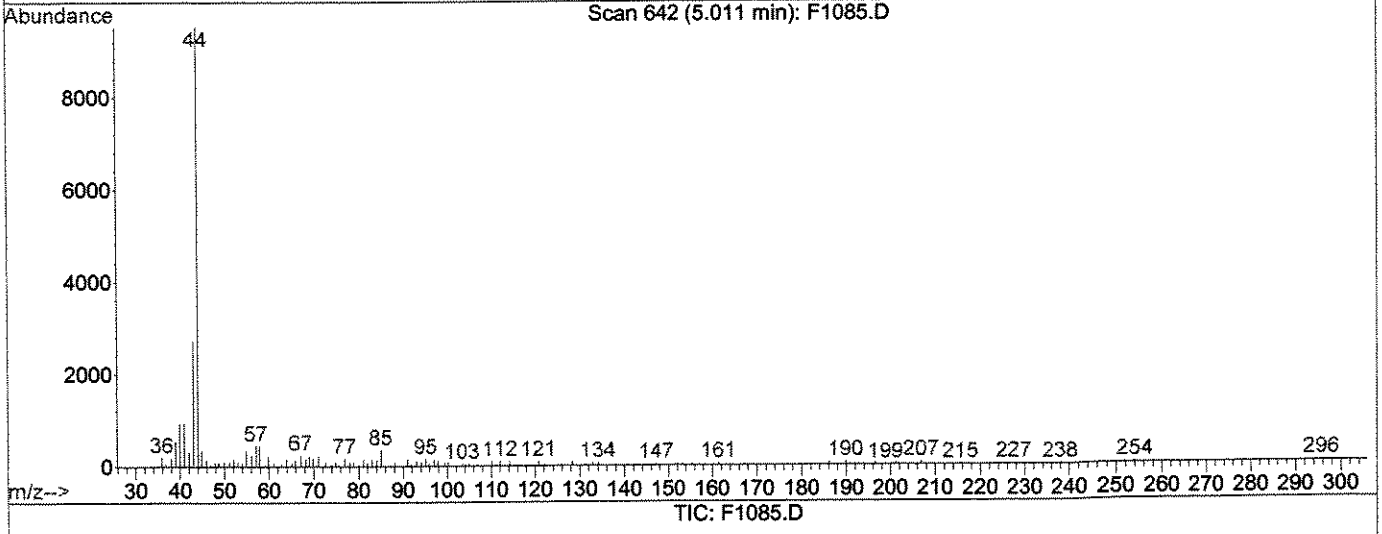
Ion	Exp%	Act%
42.00	100	100
72.00	39.80	68.75#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:12 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(64) 4-Methyl-2-Pentanone

5.01min 3.47ppb

response 8397

Ion	Exp%	Act%
43.00	100	100
58.00	35.10	16.16#
0.00	0.00	0.00
0.00	0.00	0.00

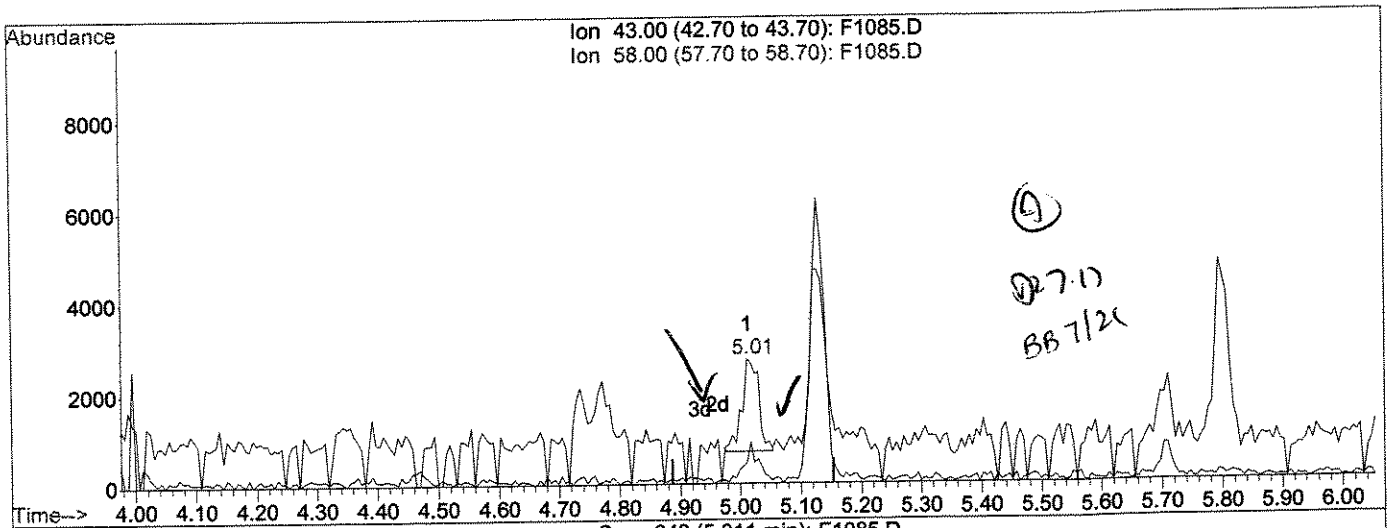
Quantitation Report (Qedit)

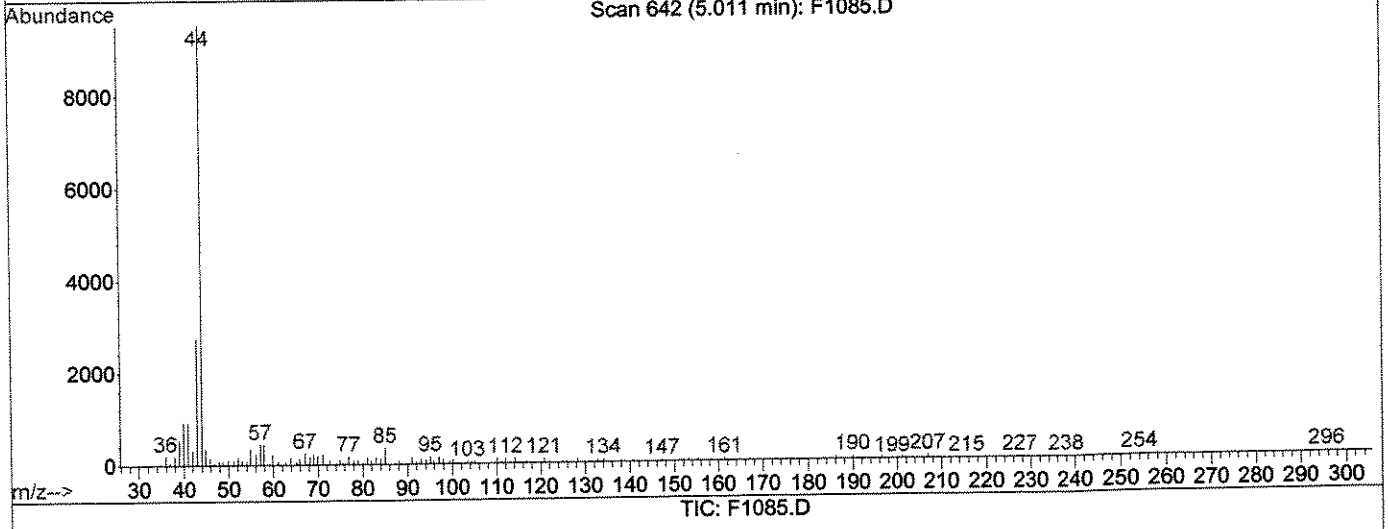
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D
Acq On : 17 Jul 2009 11:38 am
Sample : 1.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:50 2009

Vial: 8
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(64) 4-Methyl-2-Pentanone

5.01min 1.62ppb m

response 3911

Ion	Exp%	Act%
43.00	100	100
58.00	35.10	16.16#
0.00	0.00	0.00
0.00	0.00	0.00

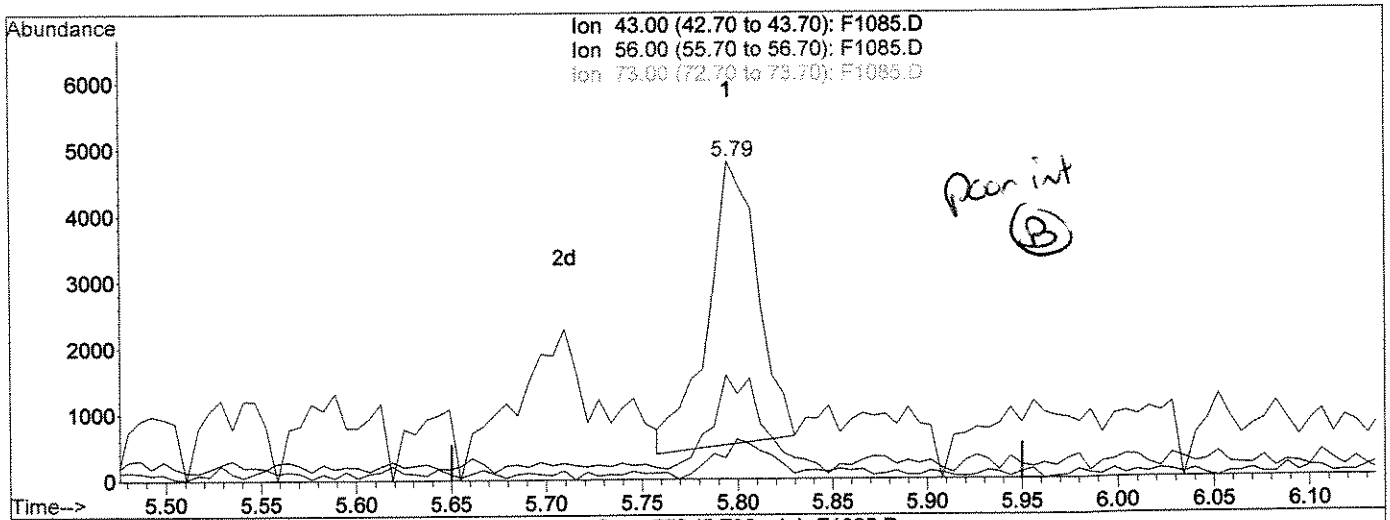
Quantitation Report (Qedit)

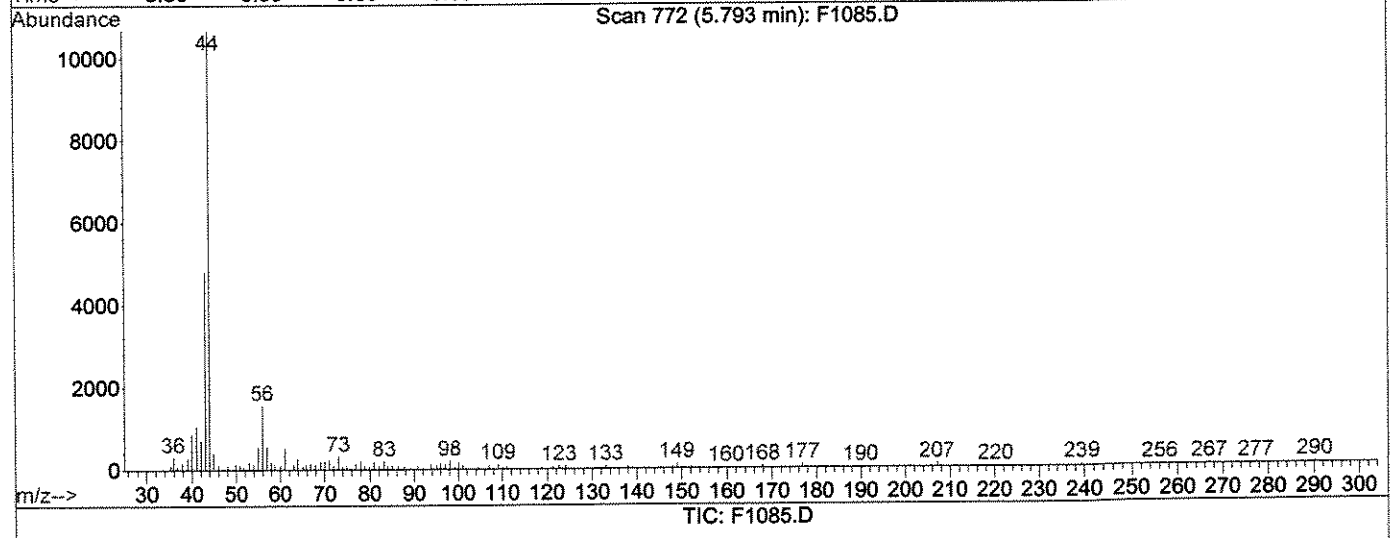
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D
Acq On : 17 Jul 2009 11:38 am
Sample : 1.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:24 2009

Vial: 8
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(73) N-Butyl Acetate

5.79min 1.82ppb

response 7754

Ion	Exp%	Act%
43.00	100	100
56.00	34.50	32.71
73.00	13.60	6.67#
0.00	0.00	0.00

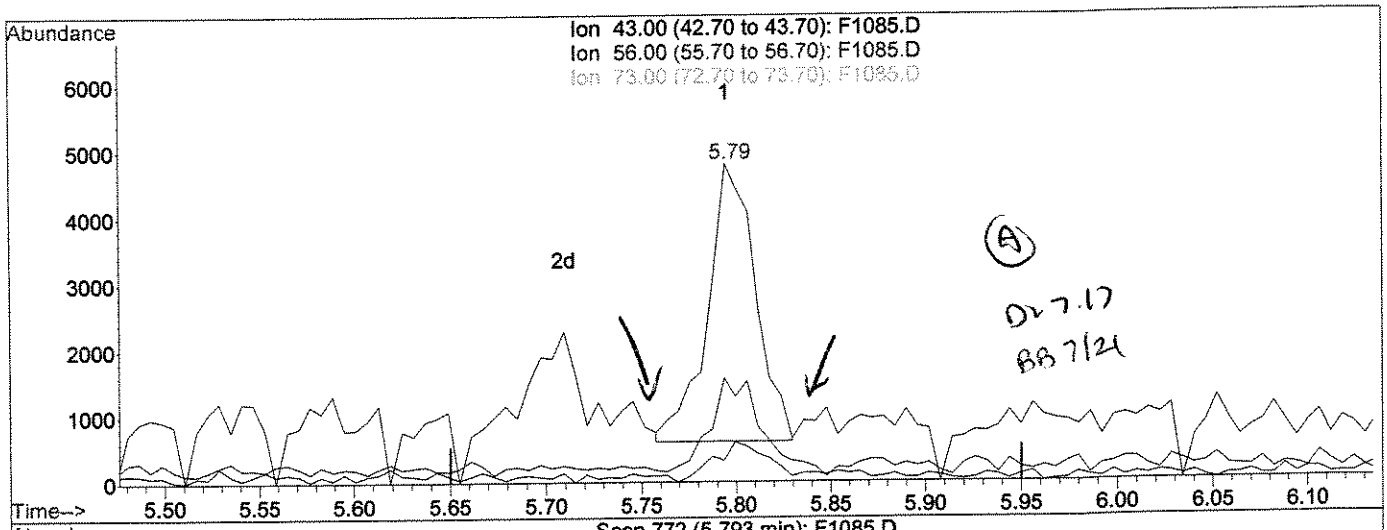
Quantitation Report (Qedit)

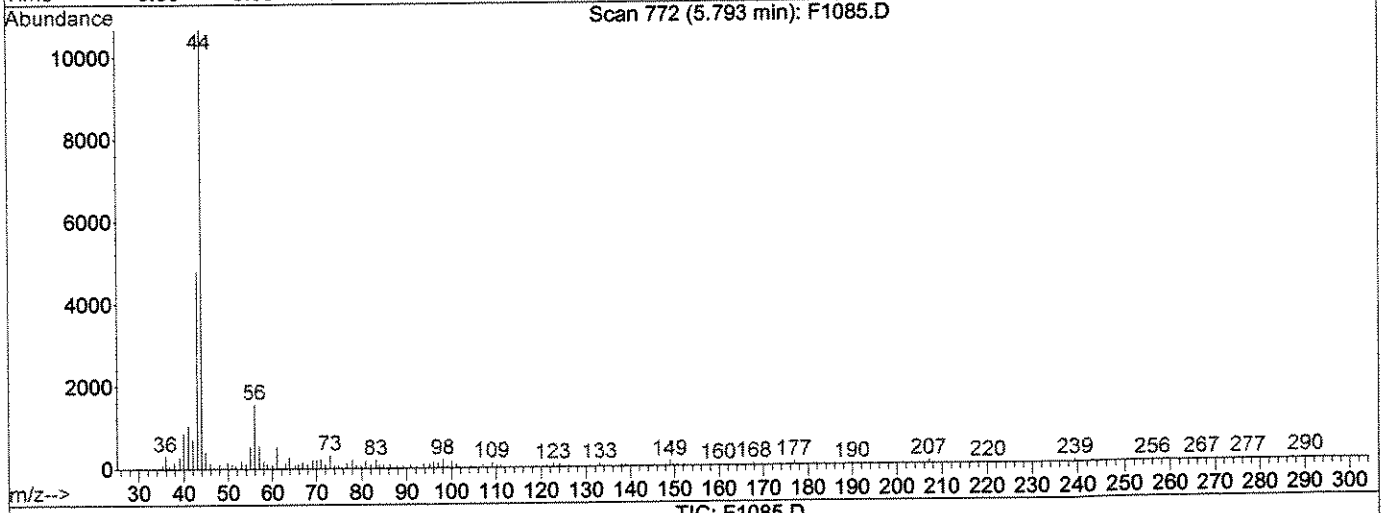
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D
Acq On : 17 Jul 2009 11:38 am
Sample : 1.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:49 2009

Vial: 8
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1085.D

(73) N-Butyl Acetate

5.79min 1.72ppb m

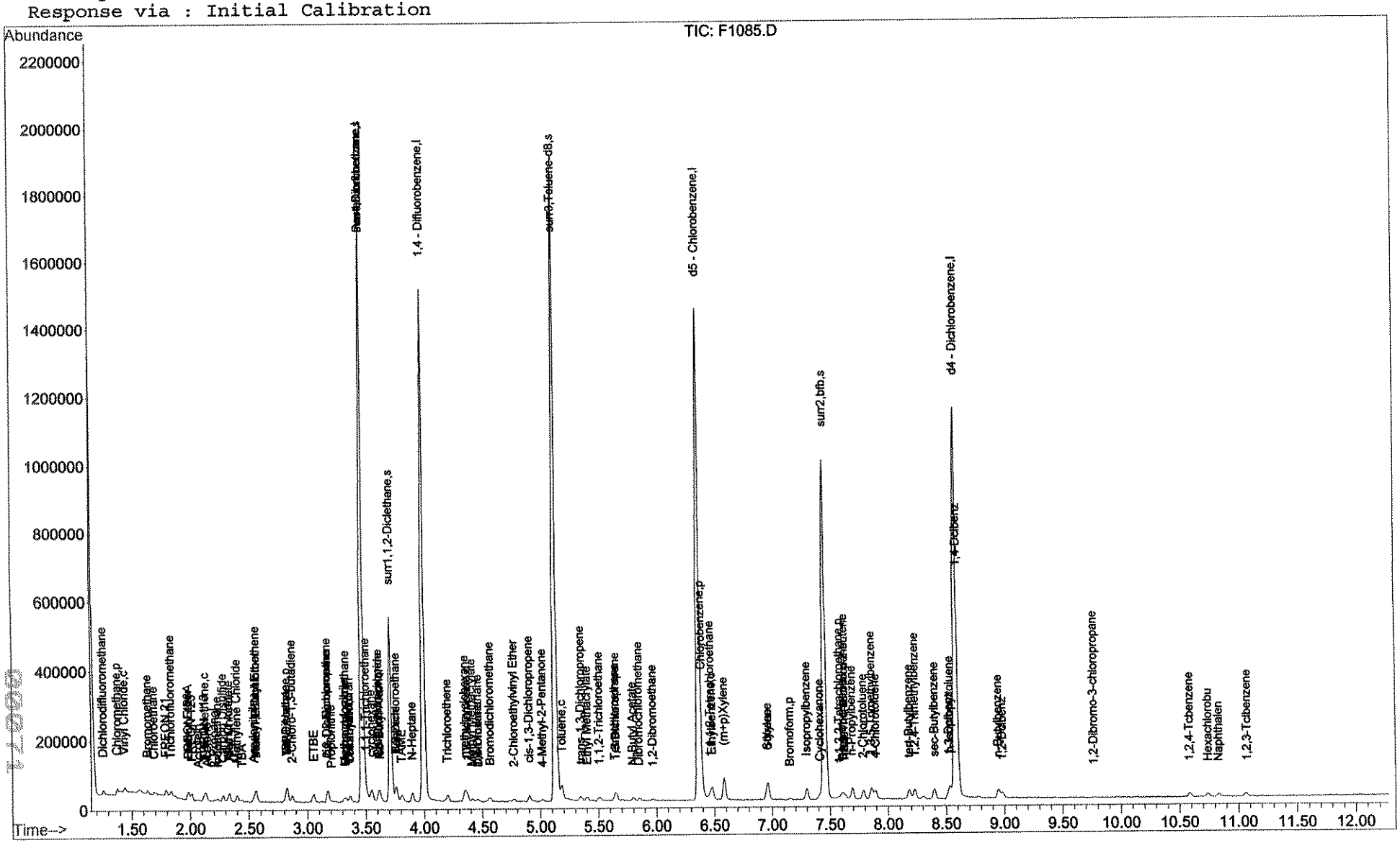
response 7349

Ion	Exp%	Act%
43.00	100	100
56.00	34.50	32.71
73.00	13.60	6.67#
0.00	0.00	0.00

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1085.D Vial: 8
Acq On : 17 Jul 2009 11:38 am Operator: D.ZIMPFER
Sample : 1.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:50 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D
Acq On : 17 Jul 2009 12:07 pm
Sample : 2.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:53 2009

Vial: 9
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

D27.0

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	579697	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	3.99	114	951637	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	802260	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.58	152	337077	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	62133	11.36	ppb		0.00
Spiked Amount 50.000			Recovery =	22.72%			
48) surr1,1,2-Diclethane	3.71	65	57906	12.55	ppb		0.00
Spiked Amount 50.000			Recovery =	25.10%			
69) surr3,Toluene-d8	5.13	98	235985	12.24	ppb		0.00
Spiked Amount 50.000			Recovery =	24.48%			
70) surr2,bfb	7.45	95	94676	13.23	ppb		0.00
Spiked Amount 50.000			Recovery =	26.46%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	10779	2.42	ppb		97
4) Chloromethane	1.37	50	14374	2.78	ppb		98
5) Vinyl Chloride	1.44	62	14046	2.55	ppb		93
6) Bromomethane	1.64	96	7097	1.86	ppb		95
7) Chloroethane	1.69	64	10635	2.45	ppb		92
8) FREON 21	1.79	67	21624	2.26	ppb		99
9) Trichlorofluoromethane	1.83	101	13674	2.08	ppb		99
10) Diethyl Ether	1.99	59	7081	2.35	ppb		89
11) FREON 123A	1.98	85	5657	2.12	ppb		96
12) FREON 123	2.01	85	11078	2.36	ppb		94
13) Acrolein	2.07	56	3541	13.08	ppb		91
14) FREON 113	2.12	85	4494	2.32	ppb		95
15) 1,1-Diclethene	2.13	96	9610	2.20	ppb		95
16) Acetone	2.15	43	2799	2.41	ppb	#	69
17) 2-Propanol	2.21	45	6167	48.39	ppb	#	54
18) Iodomethane	2.23	127	4326	1.63	ppb		84
19) Carbon Disulfide	2.28	76	33098	2.27	ppb		99
20) Acetonitrile	2.32	40	3148m	17.25	ppb		
21) Allyl Chloride	2.33	76	6206	2.29	ppb		83
22) Methyl Acetate	2.33	43	8332	3.04	ppb		91
23) Methylene Chloride	2.40	84	11097	2.18	ppb		90
24) TBA	2.44	59	8108	43.30	ppb	#	48
25) Acrylonitrile	2.54	53	11791	13.02	ppb		98
26) Methyl-t-Butyl Ether	2.56	73	20998	2.28	ppb	#	89
27) trans-1,2-Dichloroethene	2.56	96	11438	2.27	ppb		97
28) 1,1-Diclethane	2.82	63	21132	2.49	ppb	#	95
29) DIPE	2.83	45	45026	2.87	ppb		98
30) Vinyl Acetate	2.82	86	1078	2.04	ppb		90
31) 2-Chloro-1,3-butadiene	2.87	53	14690	2.28	ppb		98
32) ETBE	3.05	59	30349	2.40	ppb		96
33) 2,2-Dichloropropane	3.18	77	16876	2.51	ppb		97
34) 2-Butanone	3.17	43	7959	6.48	ppb	#	83
35) cis-1,2-Dichloroethene	3.17	96	12691	2.28	ppb		98
36) Propionitrile	3.21	54	4123	14.58	ppb	#	72
37) Methacrylonitrile	3.31	67	2657	2.41	ppb		72

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:53 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	Bromochloromethane	3.33	128	4511	1.87	ppb		93
39)	Chloroform	3.36	83	19360	2.35	ppb		94
40)	Tetrahydrofuran	3.37	42	2114	2.75	ppb		94
41)	1,1,1-Trichloroethane	3.50	97	16212	2.47	ppb	#	79
44)	cyclohexane	3.54	56	23016	2.99	ppb		98
45)	Carbontetrachloride	3.62	117	12390	2.38	ppb		93
46)	1,1-Dichloropropene	3.61	75	16908	2.62	ppb		98
47)	Iso-Butyl Alcohol	3.63	43	6127	67.48	ppb		90
49)	Benzene	3.76	78	47166	2.47	ppb		99
50)	1,2-Dichloroethane	3.76	62	11121	2.27	ppb		95
51)	TAME	3.81	73	23778	2.38	ppb		93
52)	N-Heptane	3.90	43	19323	2.90	ppb		98
53)	Trichloroethene	4.20	95	11740	2.28	ppb		97
54)	methylcyclohexane	4.34	55	19006	2.91	ppb		89
55)	1,2-Diclpropane	4.37	63	11489	2.54	ppb		91
56)	Methyl Methacrylate	4.42	69	5402	2.83	ppb		98
57)	1,4-Dioxane	4.46	88	1104	54.84	ppb		99
58)	Dibromomethane	4.46	93	5723	2.42	ppb		94
59)	Bromodichloromethane	4.56	83	12940	2.32	ppb		91
61)	2-Chloroethylvinyl Ether	4.77	63	5141	2.55	ppb		93
62)	cis-1,3-Dichloropropene	4.91	75	16903	2.50	ppb		98
64)	4-Methyl-2-Pentanone	5.02	43	6674m	2.74	ppb		
65)	Toluene	5.18	91	47846	2.39	ppb		96
66)	trans-1,3-Dichloropropene	5.34	75	13741	2.64	ppb		95
67)	Ethyl Methacrylate	5.40	69	10142	2.66	ppb		92
68)	1,1,2-Trichloroethane	5.51	83	6258	2.55	ppb	#	86
71)	Tetrachloroethene	5.64	166	10761	2.15	ppb		94
72)	2-Hexanone	5.71	43	3926m	2.25	ppb		
73)	N-Butyl Acetate	5.80	43	15627m	3.64	ppb		
74)	1,3-Dichloropropane	5.66	76	13148	2.48	ppb		89
75)	Dibromochloromethane	5.85	129	7100	2.03	ppb		93
76)	1,2-Dibromoethane	5.97	107	6261	2.10	ppb		86
77)	Chlorobenzene	6.40	112	28066	2.22	ppb		99
78)	1,1,1,2-Tetrachloroethane	6.46	131	8478	2.09	ppb		88
79)	Ethylbenzene	6.48	91	51314	2.40	ppb		96
80)	(m+p)Xylene	6.58	106	35869	4.29	ppb		94
81)	o-Xylene	6.96	106	17685	2.21	ppb		99
82)	Styrene	6.97	104	27643	2.15	ppb		97
84)	Bromoform	7.15	173	3611	2.22	ppb		96
85)	Isopropylbenzene	7.29	105	44812	2.35	ppb		99
86)	Cyclohexanone	7.41	55	13815	53.20	ppb		94
87)	1,1,2,2-Tetrachloroethane	7.58	83	7142	2.29	ppb		89
88)	Trans-1,4-Dichloro-2-buten	7.63	53	1457	2.52	ppb		89
89)	1,2,3-Trichloropropane	7.62	110	2128m	2.41	ppb		
90)	n-Propylbenzene	7.69	91	56278	2.54	ppb		99
91)	Bromobenzene	7.61	156	9535	2.14	ppb		90
93)	1,3,5-Trimethylbenzene	7.86	105	37604	2.43	ppb		100
94)	2-Chlorotoluene	7.79	91	32226	2.47	ppb		97
95)	4-Chlorotoluene	7.89	91	36940	2.53	ppb		97
96)	tert-Butylbenzene	8.18	119	30938	2.27	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:53 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

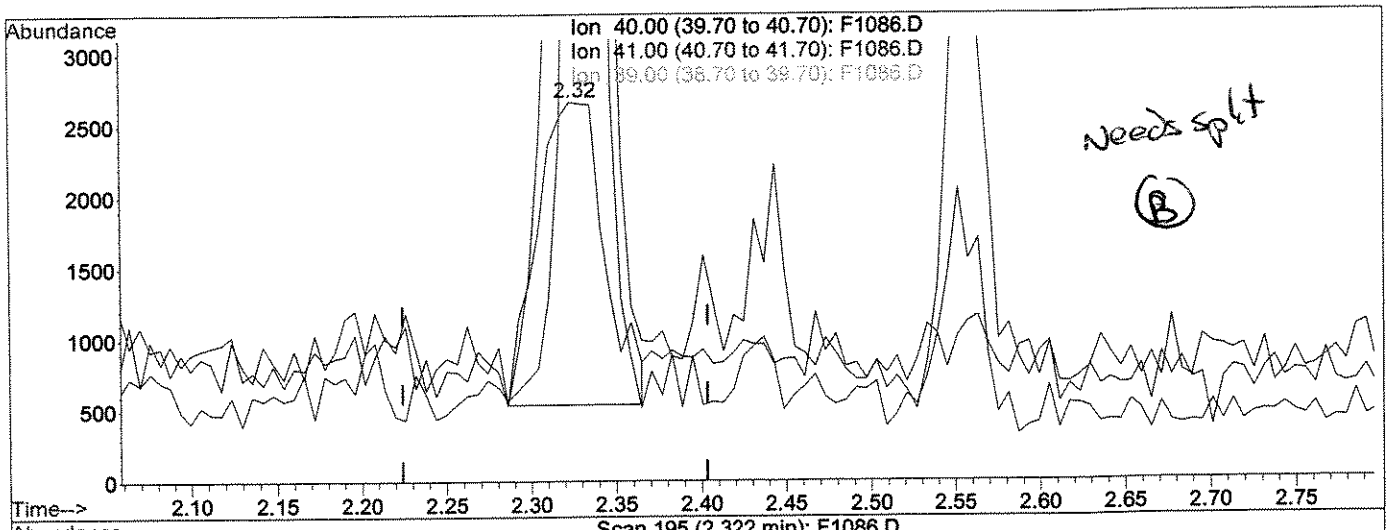
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	36716	2.40	ppb		95
98)	sec-Butylbenzene	8.39	105	45860	2.24	ppb		99
99)	p-Isopropyltoluene	8.53	119	36908	2.26	ppb		96
100)	1,3-Dclbenz	8.51	146	17860	2.20	ppb		95
101)	1,4-Dclbenz	8.60	146	18061	2.22	ppb		96
103)	n-Butylbenzene	8.94	91	34830	2.49	ppb		99
104)	1,2-Dclbenz	8.98	146	15370	2.14	ppb		94
105)	1,2-Dibromo-3-chloropropan	9.75	157	1010	1.88	ppb	#	86
107)	1,2,4-Tcbenzene	10.57	180	8021	1.87	ppb		88
108)	Hexachlorobu	10.72	225	3781	2.06	ppb	#	84
109)	Naphthalen	10.81	128	17240	1.95	ppb		95
110)	1,2,3-Tclbenzene	11.04	180	7010	1.87	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration



TIC: F1086.D

(20) Acetonitrile

2.32min 31.89ppb

response 5819

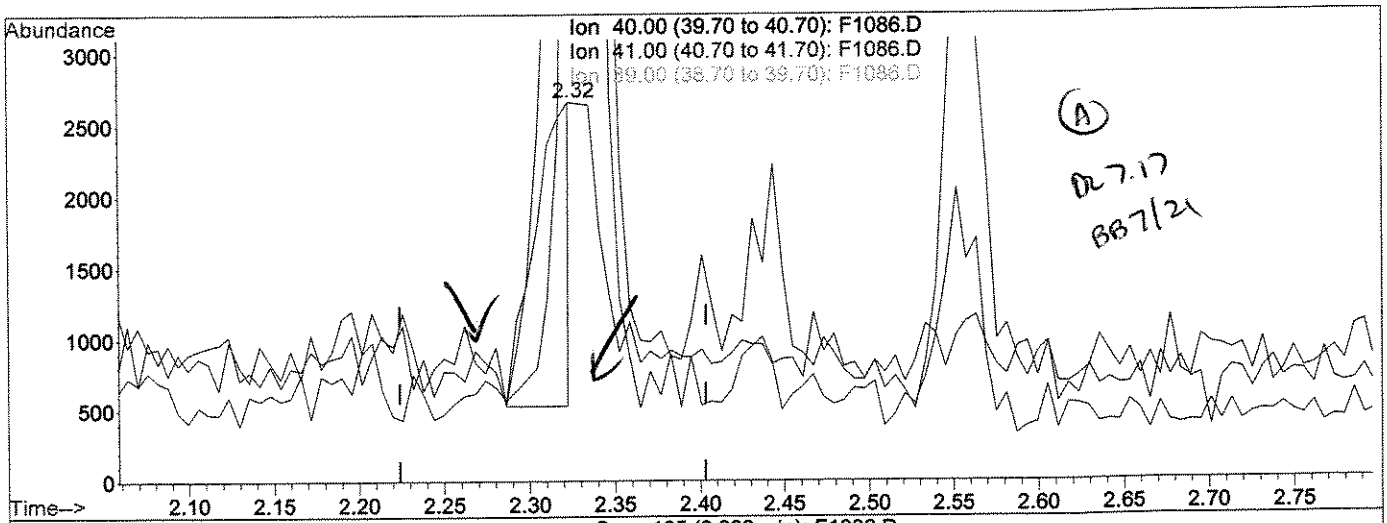
Ion	Exp%	Act%
40.00	100	100
41.00	205.80	433.50#
39.00	51.30	229.97#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D
Acq On : 17 Jul 2009 12:07 pm
Sample : 2.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:14 2009

Vial: 9
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration



TIC: F1086.D

(A) DL 7.17 BB 7/21

(20) Acetonitrile

2.32min 17.25ppb m

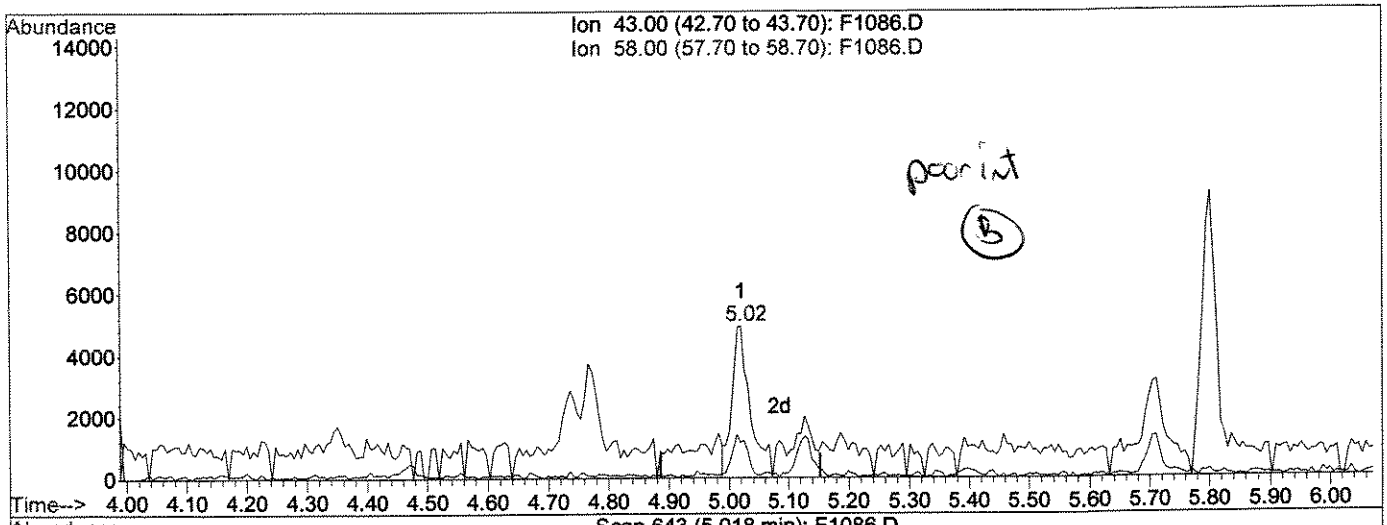
response 3148

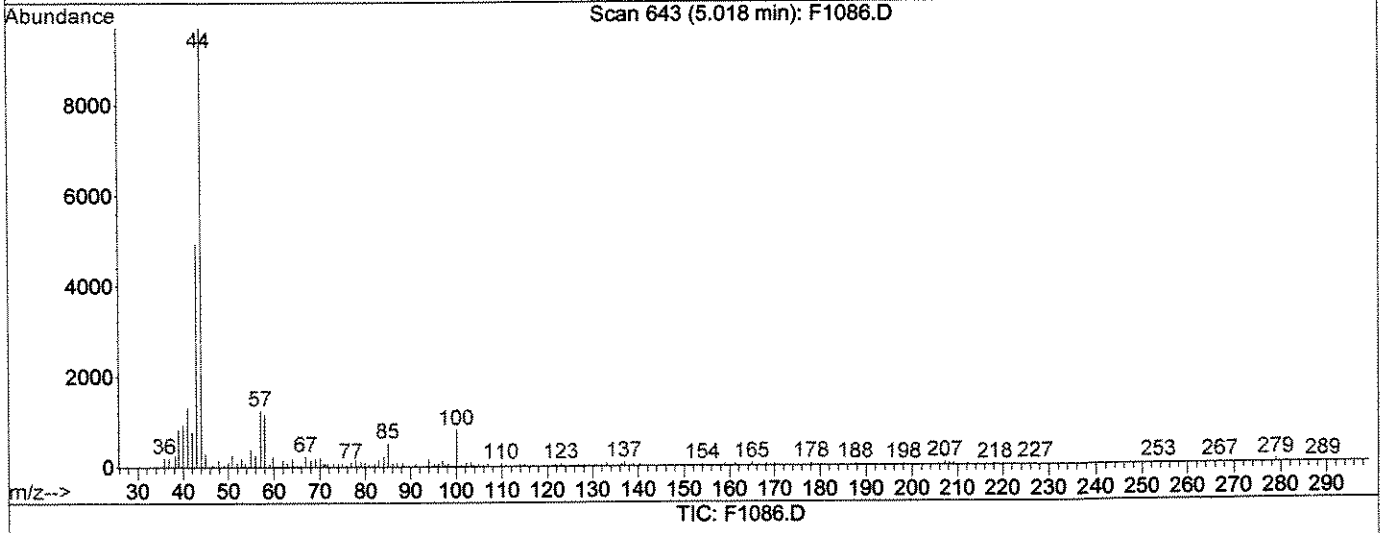
Ion	Exp%	Act%
40.00	100	100
41.00	205.80	433.50#
39.00	51.30	229.97#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:14 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1086.D

(64) 4-Methyl-2-Pentanone

5.02min 4.31ppb

response 10500

Ion	Exp%	Act%
43.00	100	100
58.00	35.10	23.44#
0.00	0.00	0.00
0.00	0.00	0.00

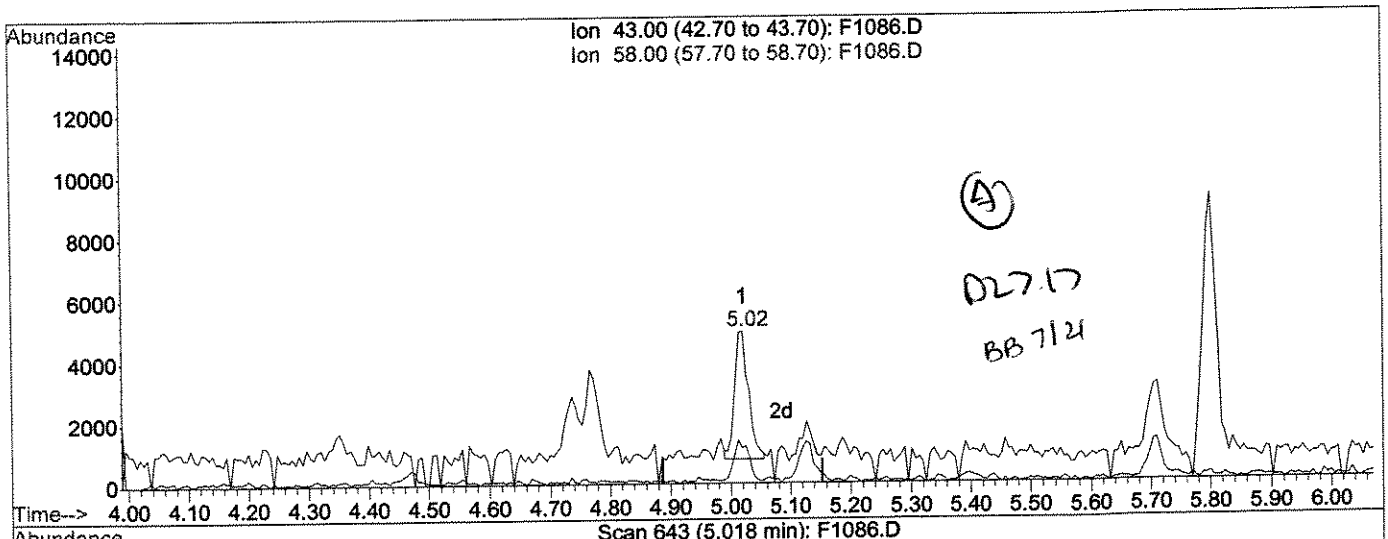
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D
Acq On : 17 Jul 2009 12:07 pm
Sample : 2.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:16 2009

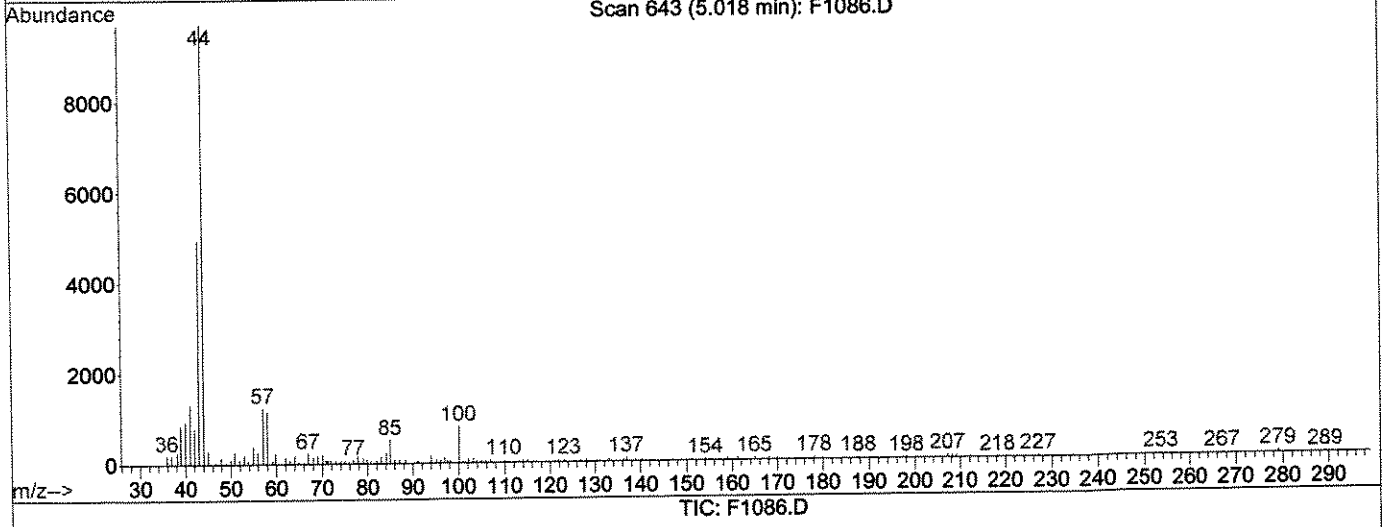
Vial: 9
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration



(4)
D27.17
BB 7/24



TIC: F1086.D

(64) 4-Methyl-2-Pentanone

5.02min 2.74ppb m

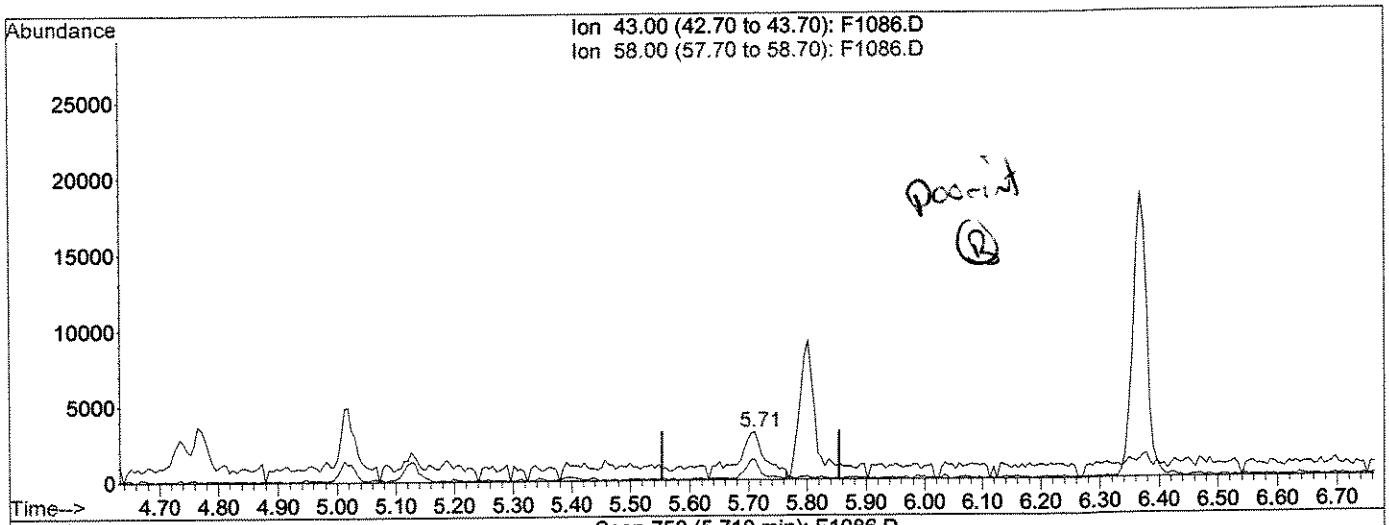
response 6674

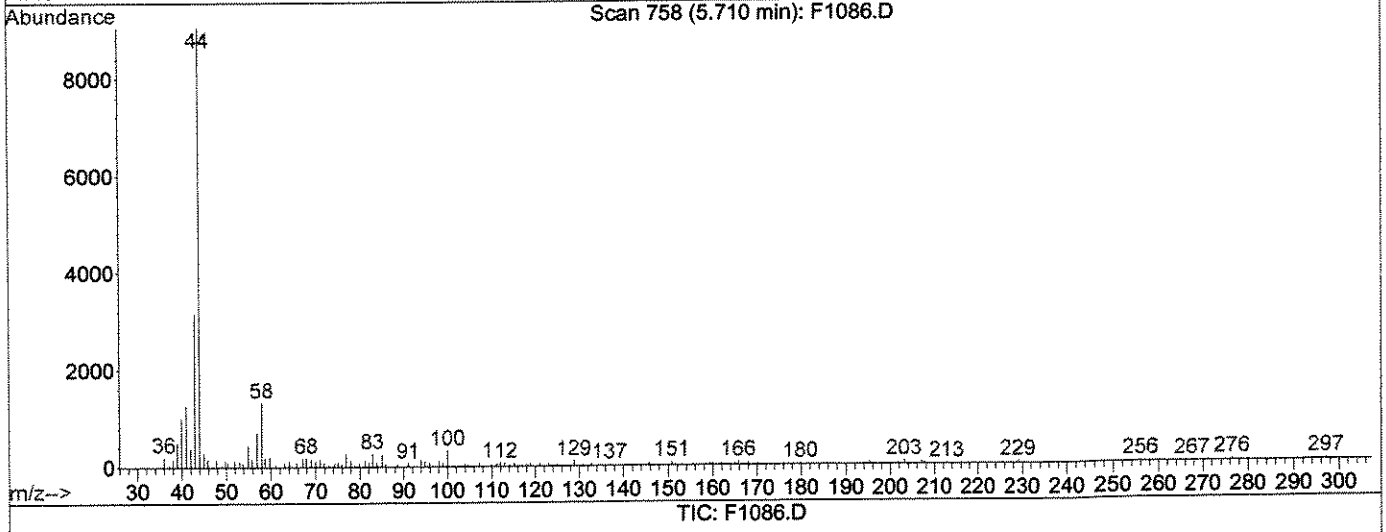
Ion	Exp%	Act%
43.00	100	100
58.00	35.10	23.44#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:53 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1086.D

(72) 2-Hexanone

5.71min 6.27ppb

response 10935

Ion	Exp%	Act%
43.00	100	100
58.00	50.00	48.32
0.00	0.00	0.00
0.00	0.00	0.00

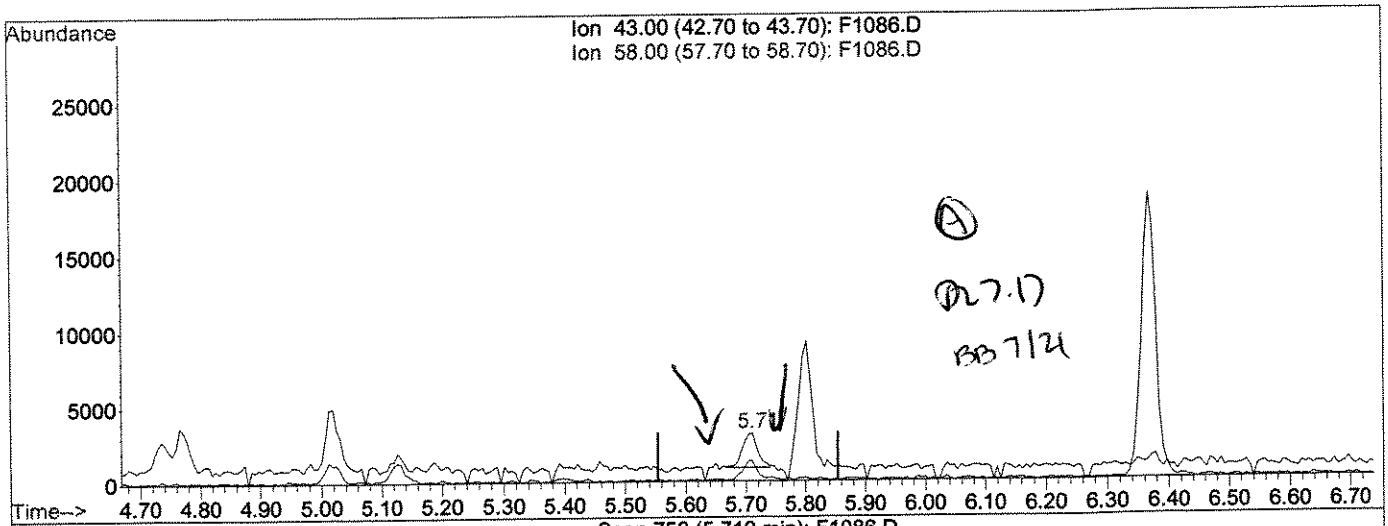
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D
Acq On : 17 Jul 2009 12:07 pm
Sample : 2.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:53 2009

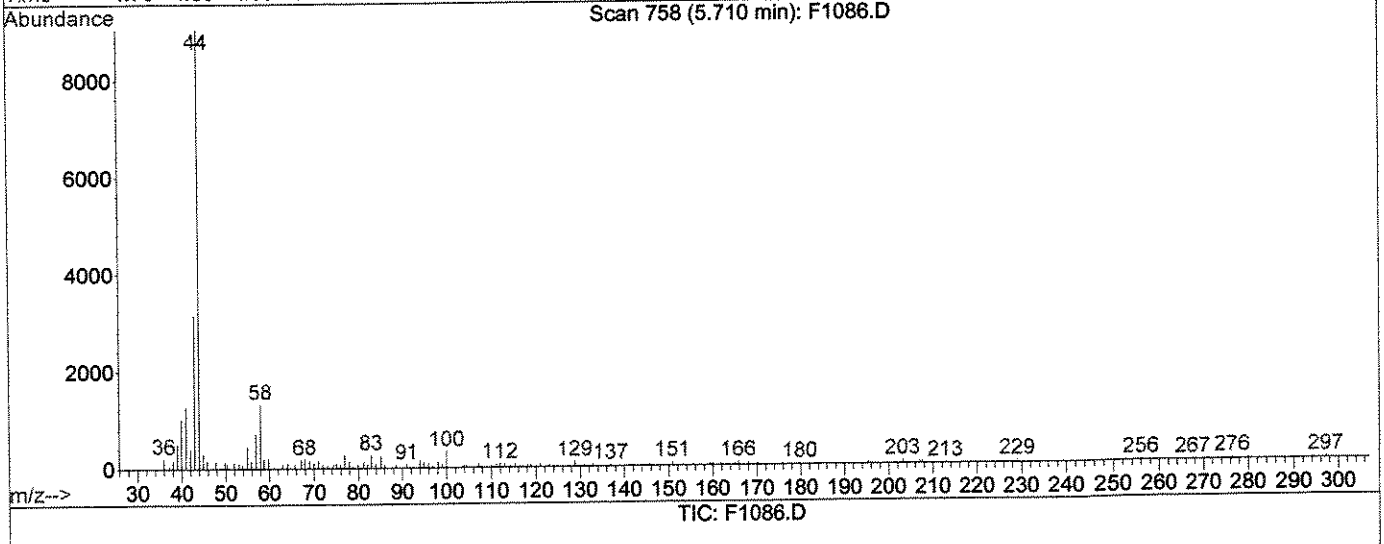
Vial: 9
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration



A
BL 7.17
BB 7/24



TIC: F1086.D

(72) 2-Hexanone

5.71min 2.25ppb m

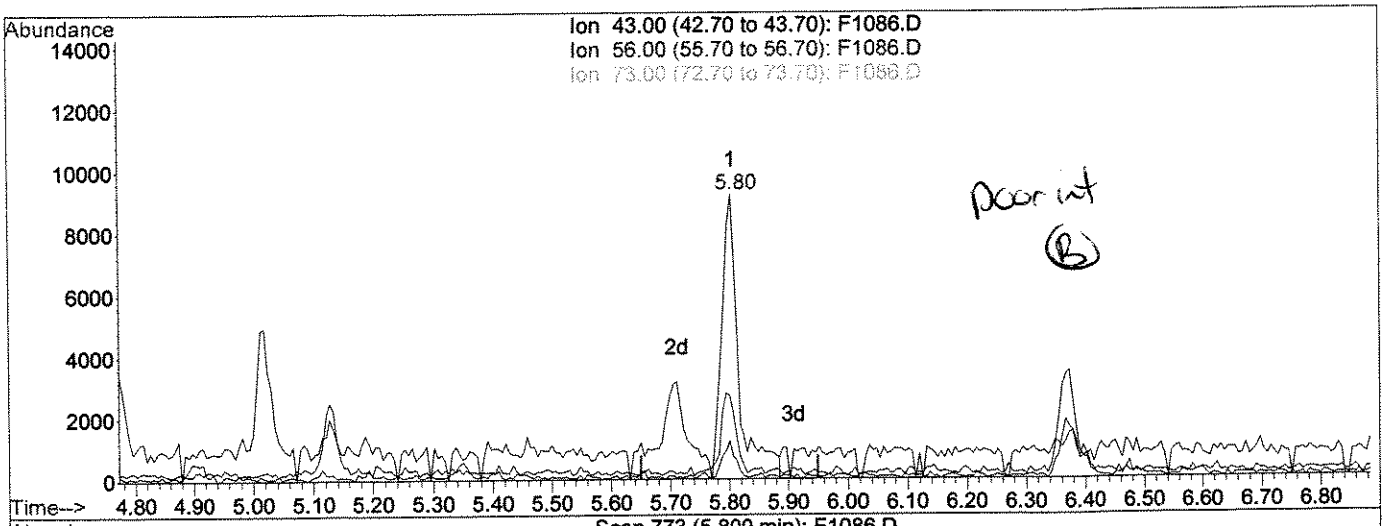
response 3926

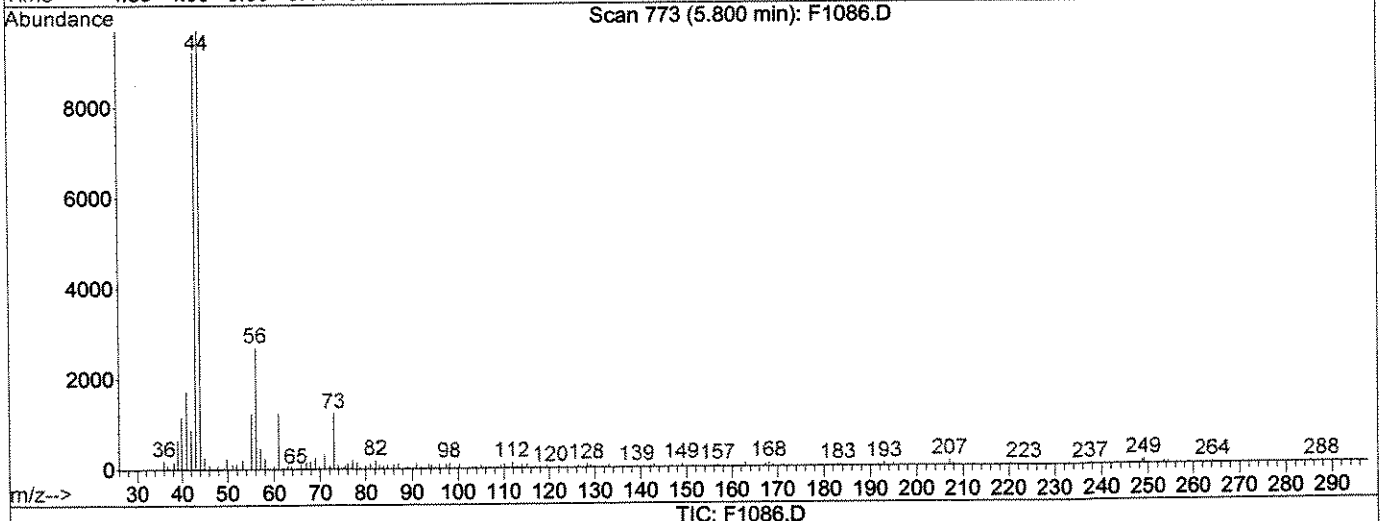
Ion	Exp%	Act%
43.00	100	100
58.00	50.00	42.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:16 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1086.D

(73) N-Butyl Acetate

5.80min 4.34ppb

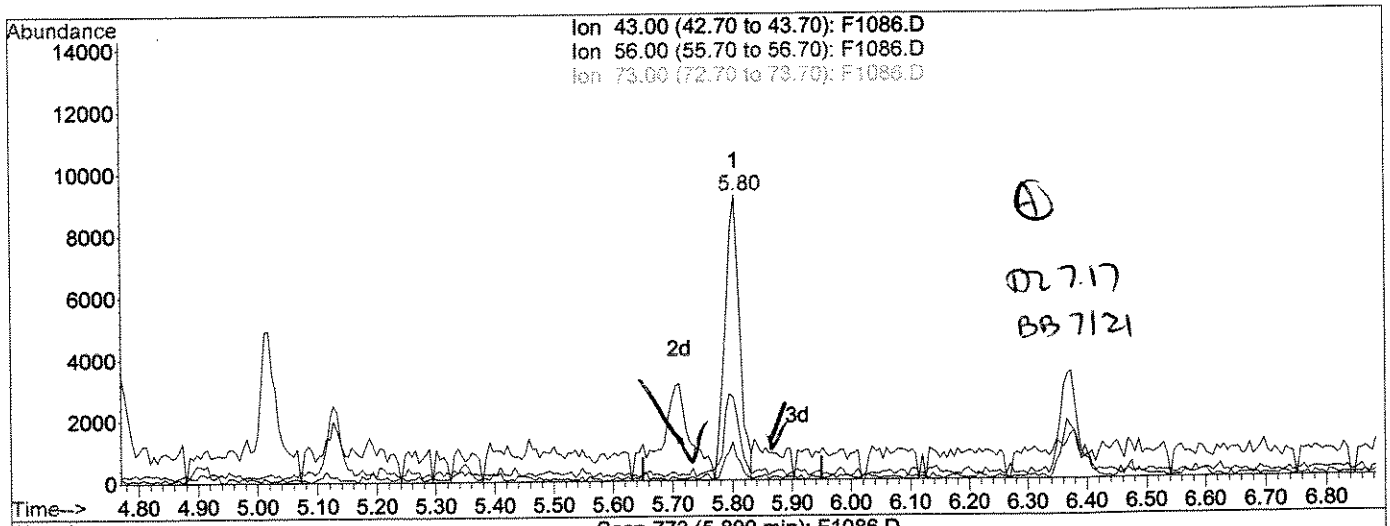
response 18634

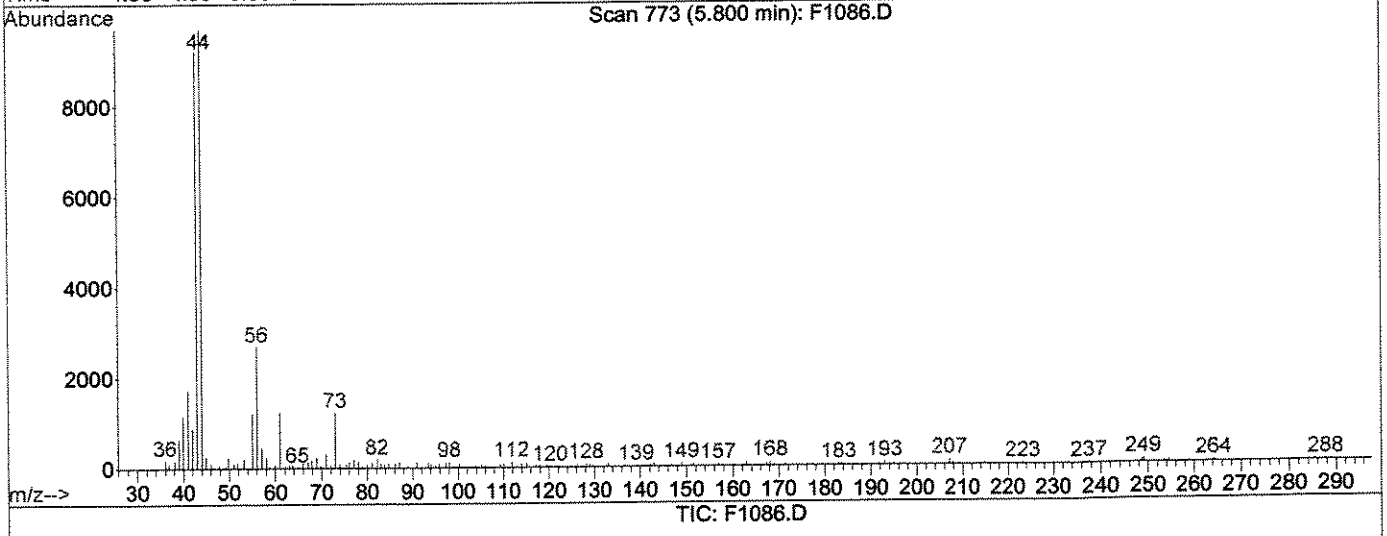
Ion	Exp%	Act%
43.00	100	100
56.00	34.50	29.23
73.00	13.60	13.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:16 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Multiple Level Calibration





TIC: F1086.D

(73) N-Butyl Acetate

5.80min 3.64ppb m

response 15627

Ion	Exp%	Act%
43.00	100	100
56.00	34.50	29.23
73.00	13.60	13.40
0.00	0.00	0.00

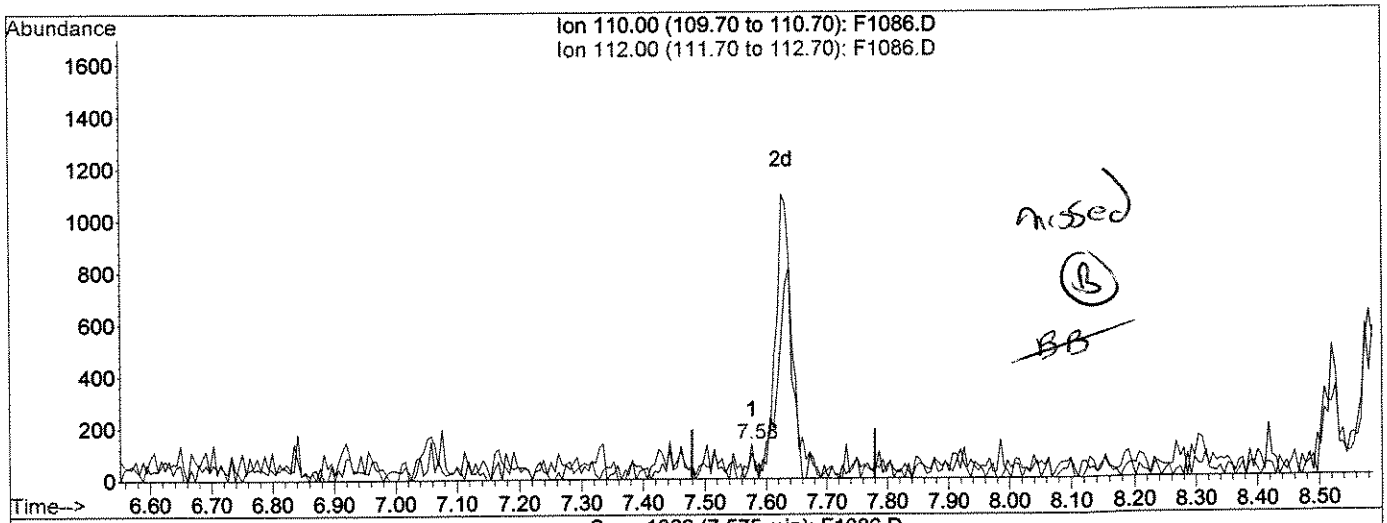
F1086.D W071709.M Fri Jul 17 14:16:26 2009

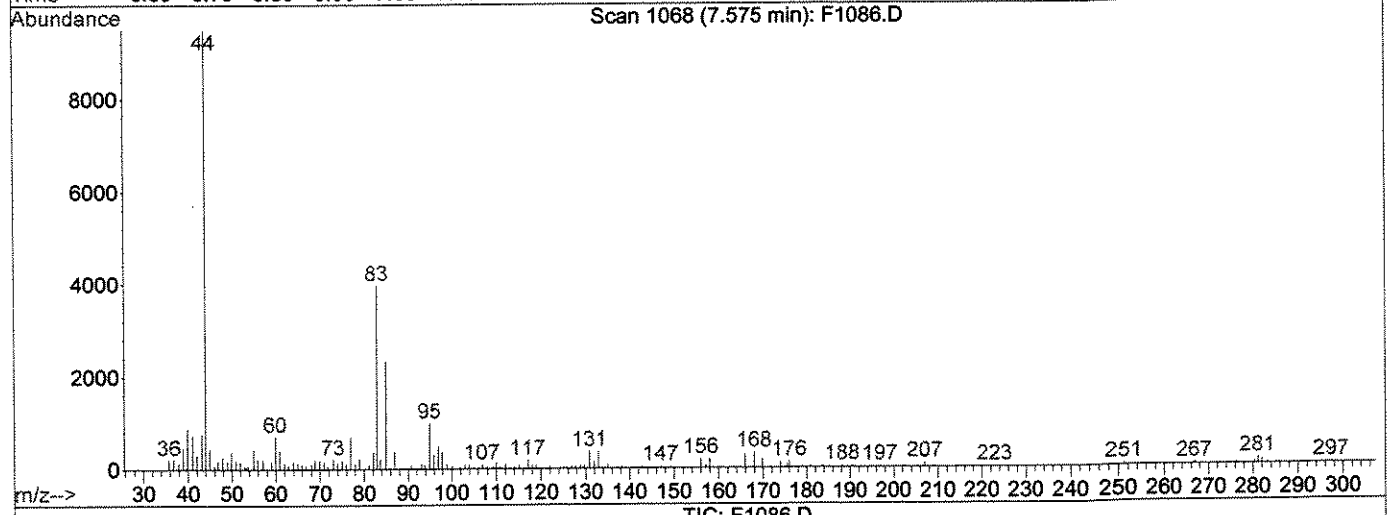
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D
Acq On : 17 Jul 2009 12:07 pm
Sample : 2.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:16 2009

Vial: 9
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:51:56 2009
Response via : Multiple Level Calibration





TIC: F1086.D

(89) 1,2,3-Trichloropropane

7.58min 0.13ppb

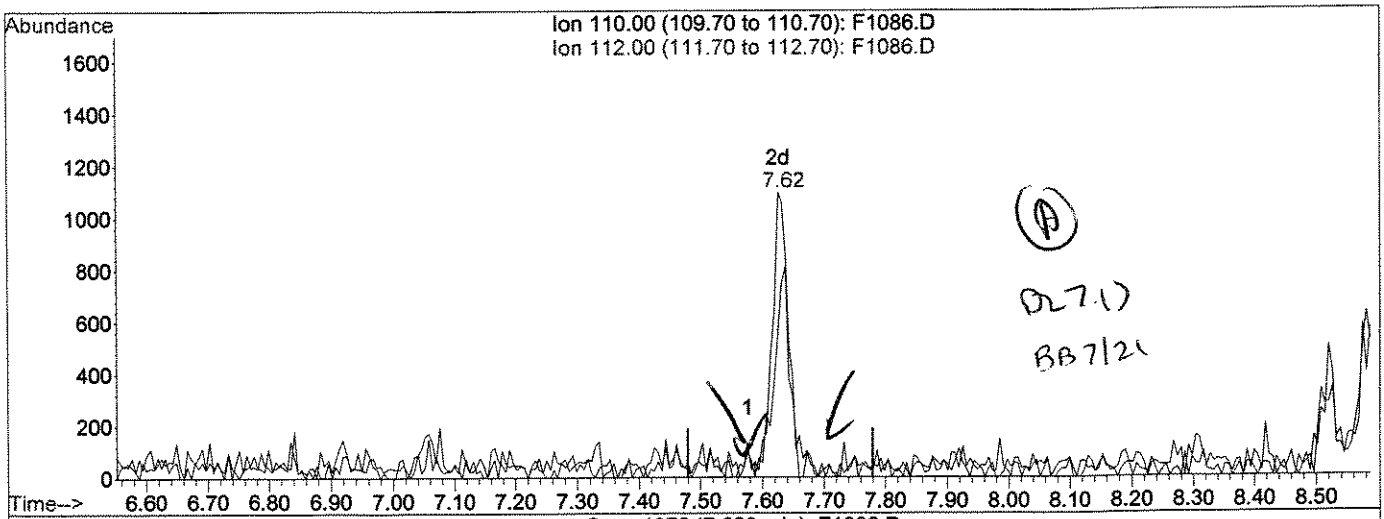
response 112

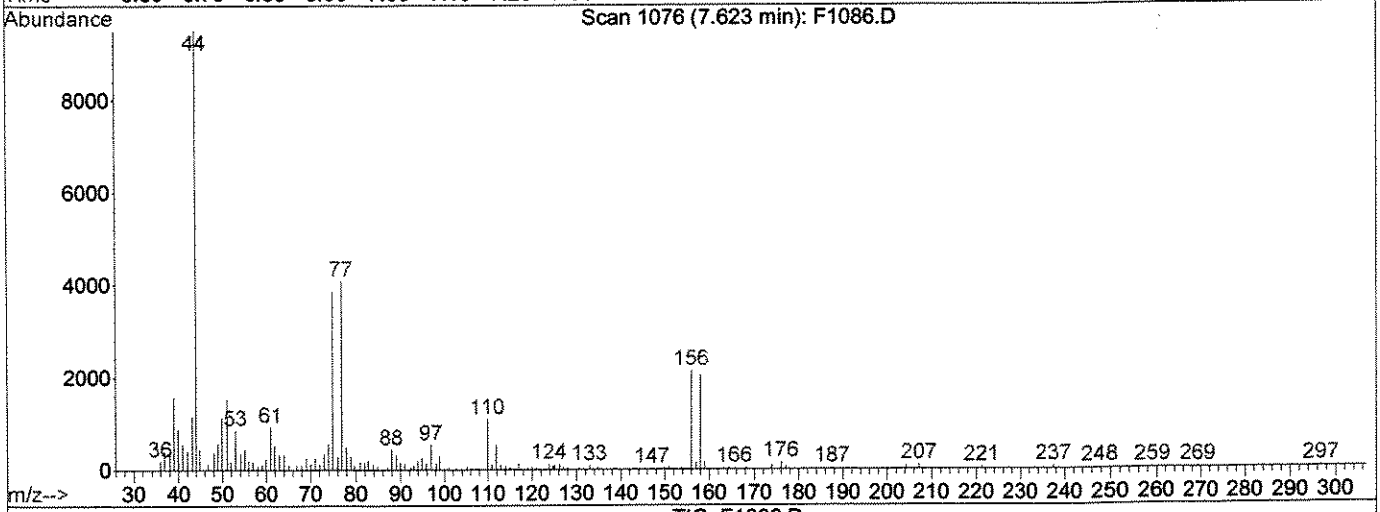
Ion	Exp%	Act%
110.00	100	100
112.00	64.80	72.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:53 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:51:56 2009
Response via : Multiple Level Calibration





TIC: F1086.D

(89) 1,2,3-Trichloropropane

7.62min 2.41ppb m

response 2128

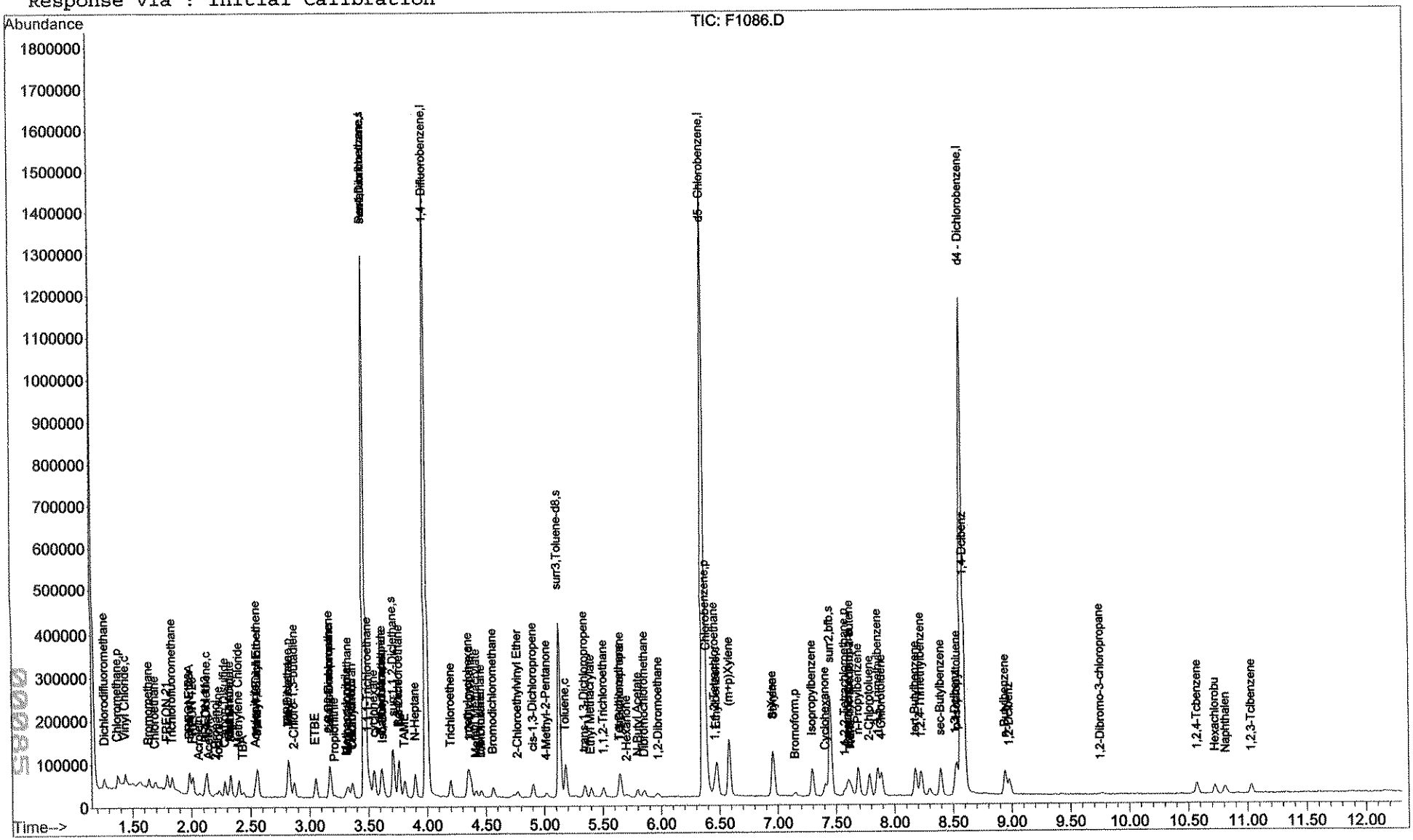
Ion	Exp%	Act%
110.00	100	100
112.00	64.80	49.27#
0.00	0.00	0.00
0.00	0.00	0.00

F1086.D W071709.M Fri Jul 17 14:53:25 2009

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1086.D Vial: 9
Acq On : 17 Jul 2009 12:07 pm Operator: D.ZIMPFER
Sample : 2.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:53 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D Vial: 10
Acq On : 17 Jul 2009 12:36 pm Operator: D.ZIMPFER
Sample : 5.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:55 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

D27.0

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	595376	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	4.00	114	963031	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	803224	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.58	152	347104	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	140667	25.42	ppb		0.00
Spiked Amount 50.000			Recovery =	50.84%			
48) surr1,1,2-Diclethane	3.71	65	133533	28.60	ppb		0.00
Spiked Amount 50.000			Recovery =	57.20%			
69) surr3,Toluene-d8	5.13	98	533913	27.66	ppb		0.00
Spiked Amount 50.000			Recovery =	55.32%			
70) surr2,bfb	7.45	95	194594	27.15	ppb		0.00
Spiked Amount 50.000			Recovery =	54.30%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	28682	6.26	ppb		99
4) Chloromethane	1.37	50	34144	6.42	ppb		95
5) Vinyl Chloride	1.44	62	33690	5.96	ppb		97
6) Bromomethane	1.64	96	17743	4.52	ppb		82
7) Chloroethane	1.69	64	23721	5.32	ppb		99
8) FREON 21	1.80	67	52901	5.39	ppb		98
9) Trichlorofluoromethane	1.84	101	32358	4.79	ppb		99
10) Diethyl Ether	1.99	59	19257	6.24	ppb		96
11) FREON 123A	1.98	85	13719	5.00	ppb		91
12) FREON 123	2.01	85	24908	5.16	ppb		98
13) Acrolein	2.07	56	8264	29.73	ppb		97
14) FREON 113	2.11	85	10073	5.06	ppb		84
15) 1,1-Diclethene	2.13	96	22900	5.10	ppb		94
16) Acetone	2.15	43	4260	3.57	ppb	#	80
17) 2-Propanol	2.20	45	15041	114.91	ppb	#	74
18) Iodomethane	2.23	127	12202	4.48	ppb		95
19) Carbon Disulfide	2.28	76	79003	5.28	ppb		98
20) Acetonitrile	2.31	40	5183	27.66	ppb	#	80
21) Allyl Chloride	2.33	76	16513	5.93	ppb		97
22) Methyl Acetate	2.33	43	23140	8.23	ppb		92
23) Methylene Chloride	2.40	84	28927	5.52	ppb		98
24) TBA	2.44	59	22178	115.32	ppb	#	82
25) Acrylonitrile	2.54	53	29301	31.51	ppb		99
26) Methyl-t-Butyl Ether	2.55	73	57313	6.06	ppb	#	91
27) trans-1,2-Dichloroethene	2.57	96	26191	5.05	ppb		98
28) 1,1-Diclethane	2.81	63	53097	6.09	ppb		97
29) DIPE	2.83	45	110305	6.85	ppb		96
30) Vinyl Acetate	2.82	86	2840	5.23	ppb		71
31) 2-Chloro-1,3-butadiene	2.87	53	39114	5.91	ppb		89
32) ETBE	3.05	59	79491	6.13	ppb		96
33) 2,2-Dichloropropane	3.17	77	41834	6.06	ppb		99
34) 2-Butanone	3.17	43	12422	9.84	ppb	#	83
35) cis-1,2-Dichloroethene	3.17	96	30182	5.29	ppb		87
36) Propionitrile	3.21	54	8977	30.90	ppb	#	68
37) Methacrylonitrile	3.31	67	6933	6.13	ppb		97

(#) = qualifier out of range (m) = manual integration

00086

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D Vial: 10
Acq On : 17 Jul 2009 12:36 pm Operator: D.ZIMPFER
Sample : 5.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:55 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	Bromochloromethane	3.33	128	11860	4.79	ppb		94
39)	Chloroform	3.37	83	48818	5.76	ppb		97
40)	Tetrahydrofuran	3.36	42	4651	5.89	ppb		90
41)	1,1,1-Trichloroethane	3.50	97	38155	5.65	ppb		92
44)	cyclohexane	3.55	56	49969	6.42	ppb		98
45)	Carbontetrachloride	3.62	117	27130	5.14	ppb		99
46)	1,1-Dichloropropene	3.61	75	37615	5.75	ppb		98
47)	Iso-Butyl Alcohol	3.63	43	17180	186.98	ppb		98
49)	Benzene	3.76	78	116741	6.05	ppb		97
50)	1,2-Dichloroethane	3.76	62	28384	5.74	ppb		99
51)	TAME	3.81	73	63979	6.32	ppb		93
52)	N-Heptane	3.90	43	40109	5.94	ppb		95
53)	Trichloroethene	4.20	95	27284	5.25	ppb		96
54)	methylcyclohexane	4.35	55	39562	5.99	ppb		100
55)	1,2-Diclpropane	4.37	63	29055	6.34	ppb		99
56)	Methyl Methacrylate	4.41	69	12380	6.41	ppb		94
57)	1,4-Dioxane	4.46	88	2215	108.73	ppb		83
58)	Dibromomethane	4.46	93	13046	5.46	ppb		89
59)	Bromodichloromethane	4.56	83	32887	5.82	ppb		99
61)	2-Chloroethylvinyl Ether	4.77	63	12278	6.02	ppb		98
62)	cis-1,3-Dichloropropene	4.91	75	41291	6.04	ppb		99
64)	4-Methyl-2-Pentanone	5.02	43	19616m	8.05	ppb		
65)	Toluene	5.18	91	112586	5.62	ppb		98
66)	trans-1,3-Dichloropropene	5.35	75	33587	6.43	ppb		97
67)	Ethyl Methacrylate	5.40	69	25985	6.80	ppb		91
68)	1,1,2-Trichloroethane	5.51	83	14742	5.99	ppb		99
71)	Tetrachloroethene	5.64	166	22591	4.51	ppb		100
72)	2-Hexanone	5.71	43	11477m	6.58	ppb		
73)	N-Butyl Acetate	5.80	43	30219	7.03	ppb		97
74)	1,3-Dichloropropane	5.66	76	33413	6.30	ppb		90
75)	Dibromochloromethane	5.86	129	18453	5.27	ppb		100
76)	1,2-Dibromoethane	5.97	107	15622	5.23	ppb		97
77)	Chlorobenzene	6.39	112	64402	5.09	ppb		97
78)	1,1,1,2-Tetrachloroethane	6.46	131	21230	5.23	ppb		97
79)	Ethylbenzene	6.48	91	117180	5.48	ppb		98
80)	(m+p)Xylene	6.59	106	83628	9.98	ppb		100
81)	o-Xylene	6.96	106	40090	5.00	ppb		96
82)	Styrene	6.96	104	65979	5.13	ppb		91
84)	Bromoform	7.15	173	9040	5.40	ppb		97
85)	Isopropylbenzene	7.30	105	95471	4.86	ppb		99
86)	Cyclohexanone	7.41	55	35794	133.85	ppb		98
87)	1,1,2,2-Tetrachloroethane	7.58	83	16709	5.20	ppb	#	97
88)	Trans-1,4-Dichloro-2-buten	7.63	53	4069	6.83	ppb		82
89)	1,2,3-Trichloropropane	7.63	110	4747	5.21	ppb		94
90)	n-Propylbenzene	7.69	91	119663	5.24	ppb		96
91)	Bromobenzene	7.61	156	23827	5.18	ppb		93
93)	1,3,5-Trimethylbenzene	7.86	105	78070	4.90	ppb		98
94)	2-Chlorotoluene	7.78	91	71859	5.34	ppb		98
95)	4-Chlorotoluene	7.89	91	79494	5.29	ppb		99
96)	tert-Butylbenzene	8.18	119	64976	4.64	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D Vial: 10
Acq On : 17 Jul 2009 12:36 pm Operator: D.ZIMPFER
Sample : 5.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:55 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

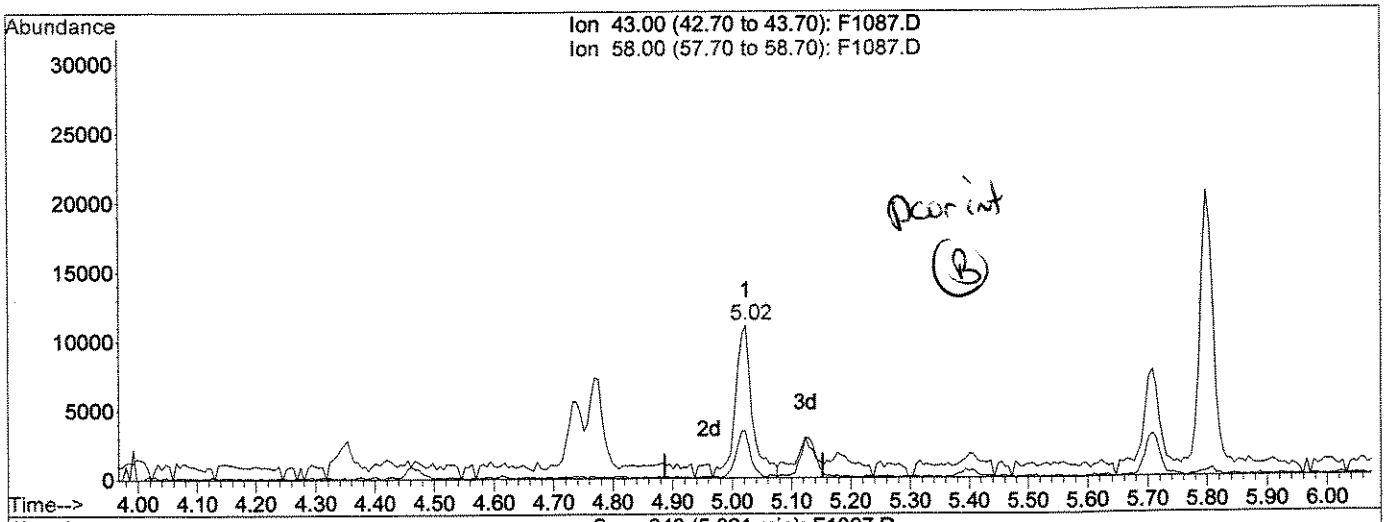
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	78386	4.98	ppb		99
98)	sec-Butylbenzene	8.40	105	97175	4.60	ppb		98
99)	p-Isopropyltoluene	8.53	119	76508	4.56	ppb		96
100)	1,3-Dclbenz	8.52	146	39138	4.69	ppb		95
101)	1,4-Dclbenz	8.61	146	38442	4.59	ppb		91
103)	n-Butylbenzene	8.94	91	72857	5.05	ppb		99
104)	1,2-Dclbenz	8.99	146	36343	4.92	ppb		94
105)	1,2-Dibromo-3-chloropropan	9.77	157	2666	4.83	ppb	#	80
107)	1,2,4-Tcbenzene	10.59	180	18728	4.23	ppb		93
108)	Hexachlorobu	10.74	225	8283	4.39	ppb	#	86
109)	Naphthalen	10.83	128	41618	4.57	ppb		97
110)	1,2,3-Tclbenzene	11.06	180	15699	4.07	ppb		100

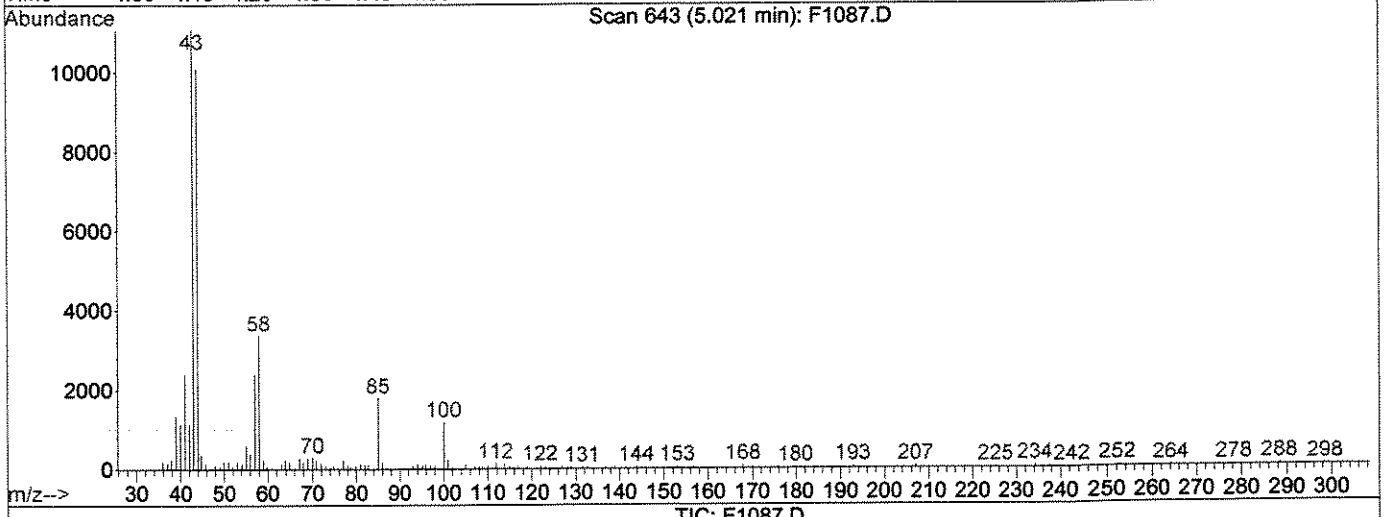
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D Vial: 10
Acq On : 17 Jul 2009 12:36 pm Operator: D.ZIMPFER
Sample : 5.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1087.D

(64) 4-Methyl-2-Pentanone

5.02min 9.19ppb

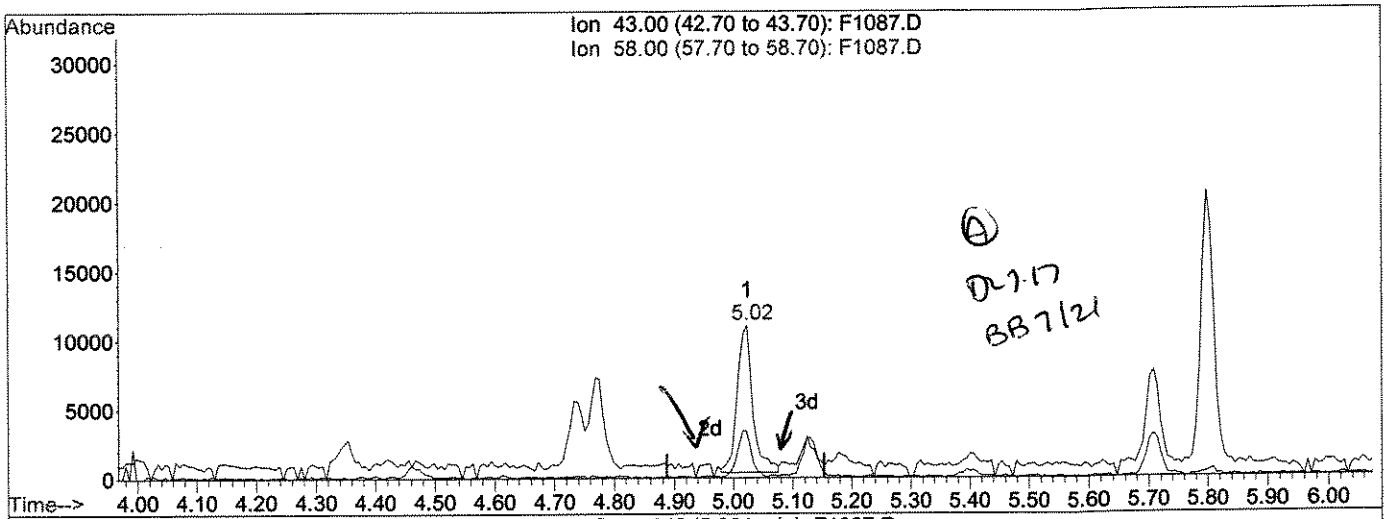
response 22395

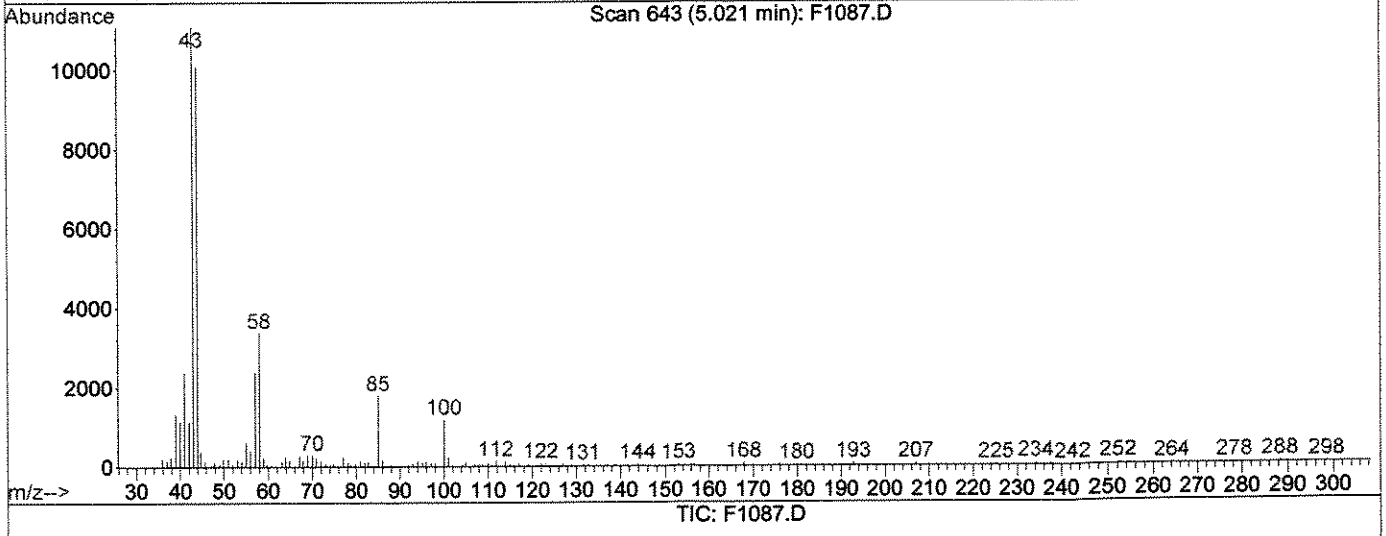
Ion	Exp%	Act%
43.00	100	100
58.00	35.10	30.42
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D Vial: 10
Acq On : 17 Jul 2009 12:36 pm Operator: D.ZIMPFER
Sample : 5.0 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:54 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1087.D

(64) 4-Methyl-2-Pentanone

5.02min 8.05ppb m

response 19616

Ion	Exp%	Act%
43.00	100	100
58.00	35.10	30.42
0.00	0.00	0.00
0.00	0.00	0.00

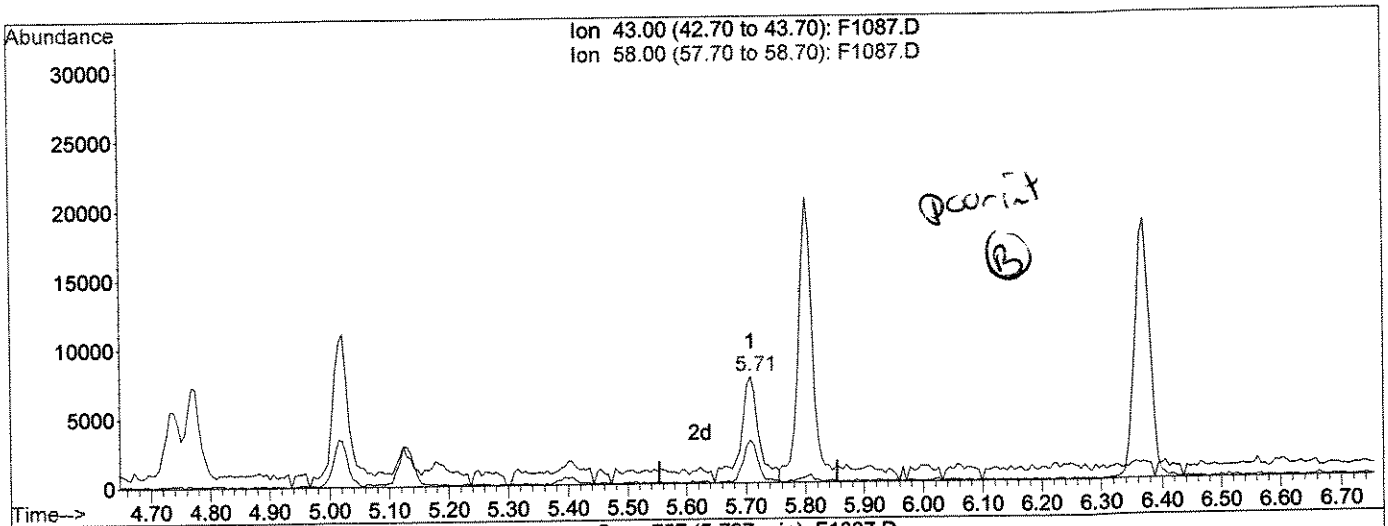
Quantitation Report (Qedit)

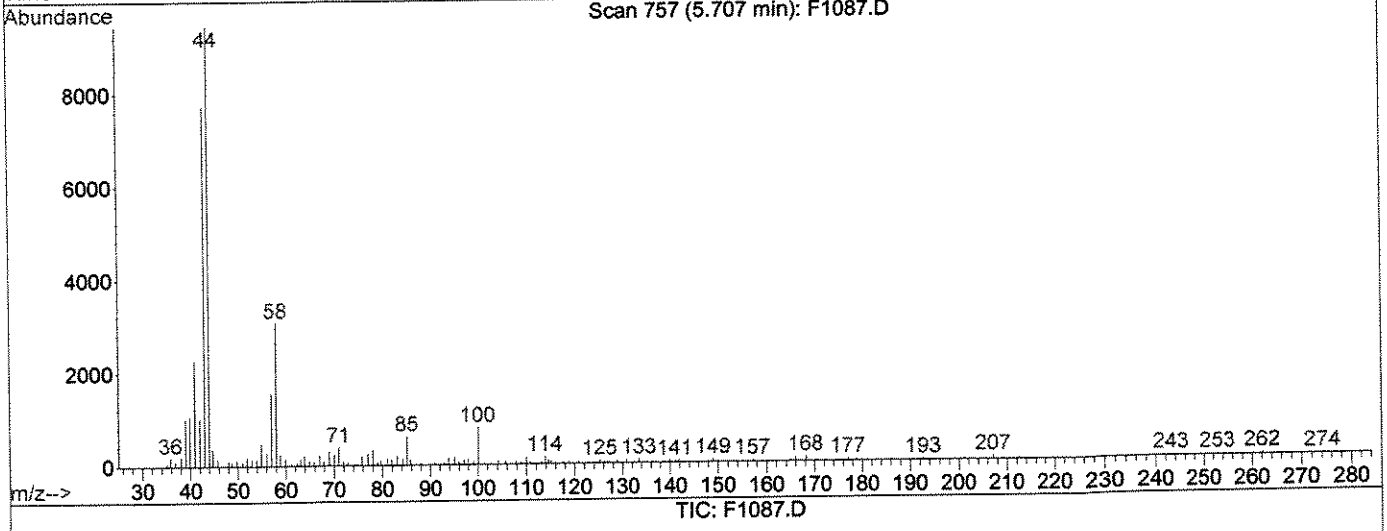
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D
Acq On : 17 Jul 2009 12:36 pm
Sample : 5.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:54 2009

Vial: 10
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





TIC: F1087.D

(72) 2-Hexanone

5.71min 9.80ppb

response 17107

Ion	Exp%	Act%
43.00	100	100
58.00	50.00	39.83#
0.00	0.00	0.00
0.00	0.00	0.00

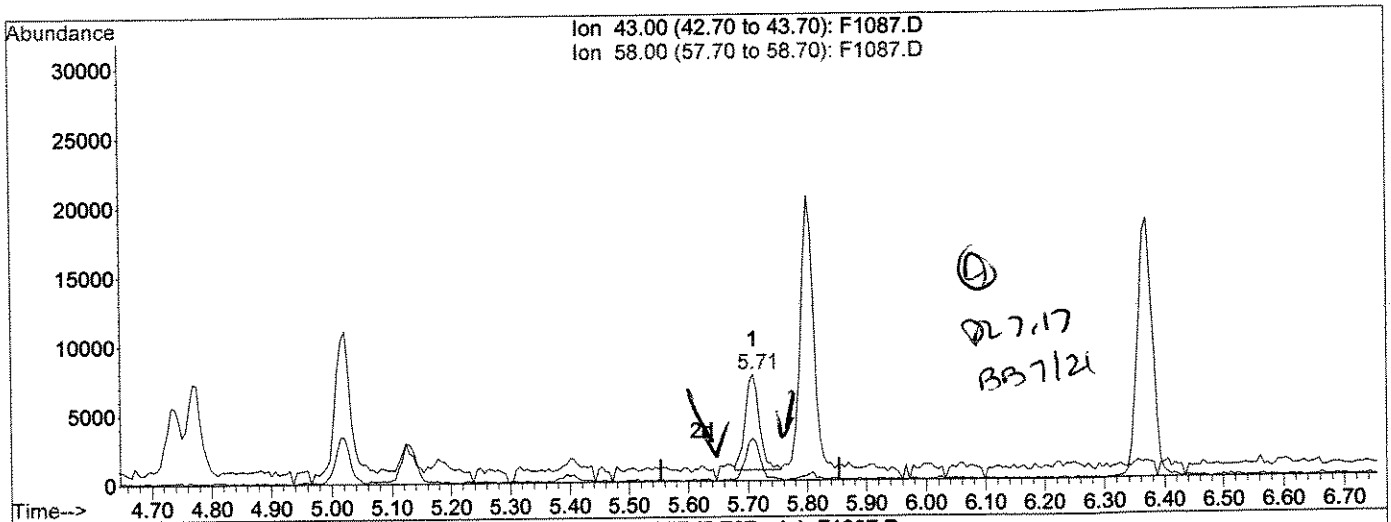
Quantitation Report (Qedit)

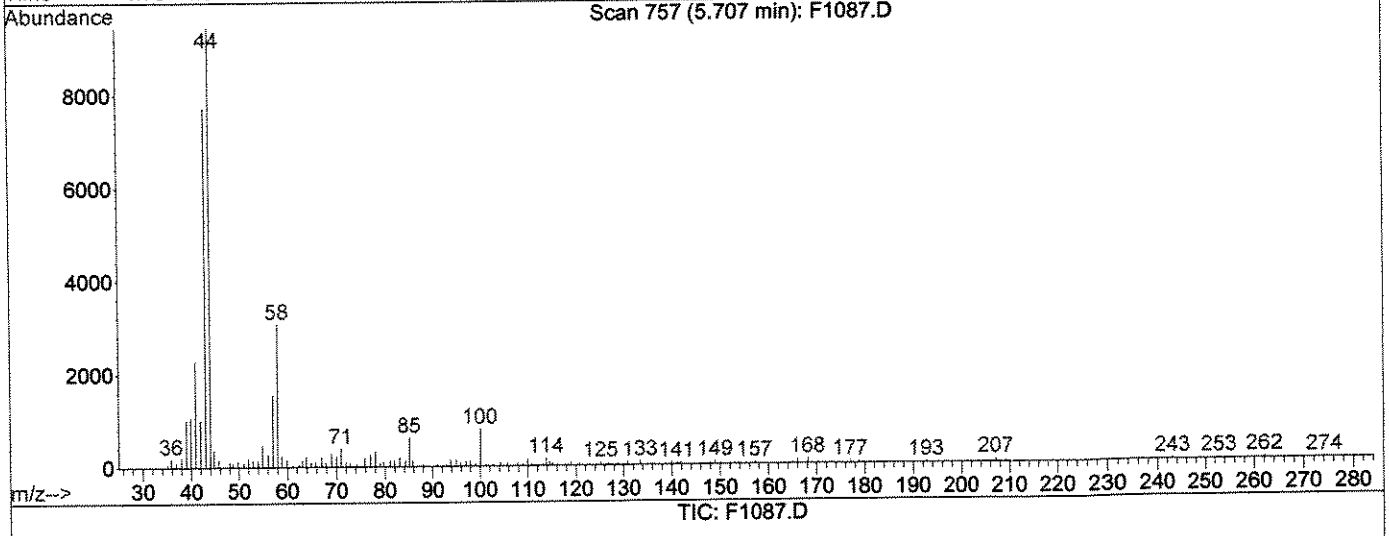
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D
Acq On : 17 Jul 2009 12:36 pm
Sample : 5.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:55 2009

Vial: 10
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 15:43:27 2009
Response via : Multiple Level Calibration





(72) 2-Hexanone

5.71min 6.58ppb m

response 11477

Ion	Exp%	Act%
43.00	100	100
58.00	50.00	39.83#
0.00	0.00	0.00
0.00	0.00	0.00

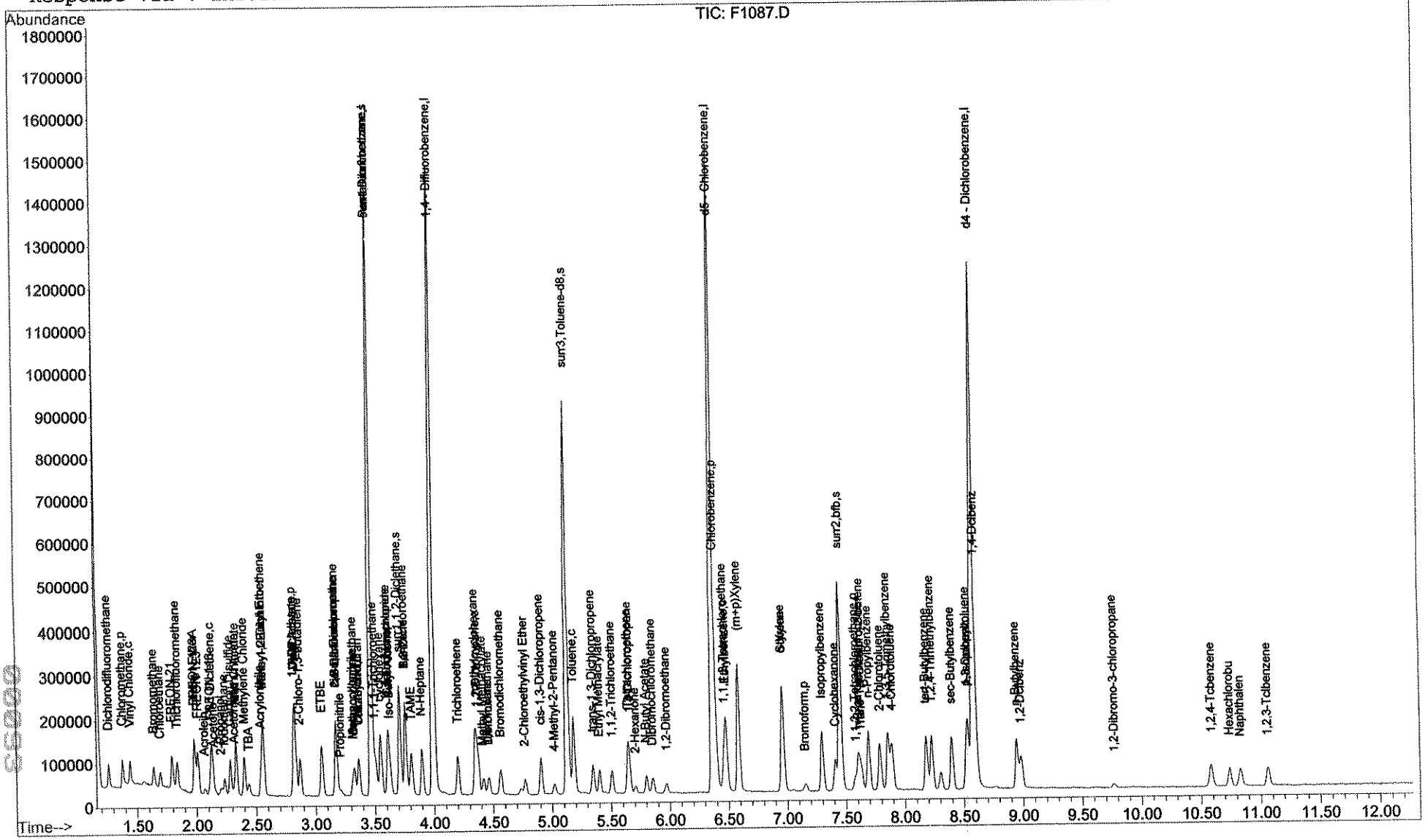
Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1087.D
Acq On : 17 Jul 2009 12:36 pm
Sample : 5.0 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:55 2009

Vial: 10
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 16:01:06 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1088.D Vial: 11
Acq On : 17 Jul 2009 1:05 pm Operator: D.ZIMPFER
Sample : 10 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

0270

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	596547	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	4.00	114	974613	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	808284	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.58	152	350474	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	215925	38.55	ppb		0.00
Spiked Amount 50.000			Recovery =	77.10%			
48) surr1,1,2-Diclethane	3.71	65	197235	41.75	ppb		0.00
Spiked Amount 50.000			Recovery =	83.50%			
69) surr3,Toluene-d8	5.13	98	800144	41.19	ppb		0.00
Spiked Amount 50.000			Recovery =	82.38%			
70) surr2,bfb	7.45	95	293205	40.65	ppb		0.00
Spiked Amount 50.000			Recovery =	81.30%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	51765	11.27	ppb		98
4) Chloromethane	1.37	50	63885	11.99	ppb		100
5) Vinyl Chloride	1.44	62	61947	10.95	ppb		99
6) Bromomethane	1.64	96	31732	8.07	ppb		95
7) Chloroethane	1.69	64	42311	9.48	ppb		100
8) FREON 21	1.79	67	107229	10.89	ppb		98
9) Trichlorofluoromethane	1.84	101	58342	8.61	ppb		97
10) Diethyl Ether	1.99	59	35290	11.41	ppb		96
11) FREON 123A	1.98	85	27298	9.92	ppb		96
12) FREON 123	2.01	85	52182	10.79	ppb		97
13) Acrolein	2.07	56	16042	57.59	ppb		99
14) FREON 113	2.12	85	17970	9.01	ppb		100
15) 1,1-Diclethene	2.13	96	41898	9.31	ppb		95
16) Acetone	2.15	43	8479	7.08	ppb	#	81
17) 2-Propanol	2.21	45	28681	218.69	ppb		90
18) Iodomethane	2.23	127	26831	9.82	ppb		96
19) Carbon Disulfide	2.28	76	151645	10.12	ppb		100
20) Acetonitrile	2.31	40	10259	54.63	ppb		89
21) Allyl Chloride	2.33	76	27701	9.93	ppb		81
22) Methyl Acetate	2.33	43	40291	14.30	ppb		99
23) Methylene Chloride	2.40	84	53782	10.25	ppb		99
24) TBA	2.44	59	43657	226.56	ppb		93
25) Acrylonitrile	2.54	53	57490	61.71	ppb		96
26) Methyl-t-Butyl Ether	2.55	73	105781	11.16	ppb		95
27) trans-1,2-Dichloroethene	2.57	96	49681	9.56	ppb		98
28) 1,1-Diclethane	2.81	63	93215	10.67	ppb		96
29) DIPE	2.83	45	216340	13.40	ppb		98
30) Vinyl Acetate	2.82	86	5947	10.93	ppb		78
31) 2-Chloro-1,3-butadiene	2.87	53	72007	10.85	ppb		97
32) ETBE	3.05	59	158112	12.16	ppb		99
33) 2,2-Dichloropropane	3.18	77	73044	10.56	ppb		96
34) 2-Butanone	3.17	43	15704	12.42	ppb	#	89
35) cis-1,2-Dichloroethene	3.17	96	55044	9.63	ppb		98
36) Propionitrile	3.22	54	19044	65.43	ppb	#	87
37) Methacrylonitrile	3.31	67	12484	11.01	ppb		97

(#) = qualifier out of range (m) = manual integration
F1088.D W071709.M Fri Jul 17 14:19:05 2009

00094

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1088.D Vial: 11
Acq On : 17 Jul 2009 1:05 pm Operator: D.ZIMPFER
Sample : 10 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) Bromochloromethane	3.33	128	21794	8.78	ppb		91
39) Chloroform	3.37	83	86926	10.24	ppb		100
40) Tetrahydrofuran	3.37	42	10794	13.65	ppb		97
41) 1,1,1-Trichloroethane	3.50	97	66460	9.83	ppb		93
44) cyclohexane	3.55	56	101867	12.94	ppb		98
45) Carbontetrachloride	3.62	117	49653	9.30	ppb		95
46) 1,1-Dichloropropene	3.61	75	68863	10.40	ppb		99
47) Iso-Butyl Alcohol	3.64	43	24438	262.81	ppb		96
49) Benzene	3.76	78	209132	10.71	ppb		98
50) 1,2-Dichloroethane	3.76	62	53622	10.71	ppb	#	94
51) TAME	3.80	73	125948	12.29	ppb		99
52) N-Heptane	3.90	43	63245	9.26	ppb		97
53) Trichloroethene	4.20	95	49937	9.49	ppb		95
54) methylcyclohexane	4.35	55	84202	12.59	ppb		96
55) 1,2-Diclpropane	4.37	63	50918	10.98	ppb		96
56) Methyl Methacrylate	4.41	69	22844	11.69	ppb		88
57) 1,4-Dioxane	4.46	88	3773	183.01	ppb		89
58) Dibromomethane	4.46	93	24719	10.21	ppb		95
59) Bromodichloromethane	4.56	83	61537	10.77	ppb		96
61) 2-Chloroethylvinyl Ether	4.77	63	24711	11.98	ppb		96
62) cis-1,3-Dichloropropene	4.91	75	76673	11.08	ppb		95
64) 4-Methyl-2-Pentanone	5.01	43	35469	14.46	ppb		92
65) Toluene	5.18	91	204388	10.15	ppb		99
66) trans-1,3-Dichloropropene	5.35	75	60995	11.61	ppb		99
67) Ethyl Methacrylate	5.40	69	47699	12.41	ppb		97
68) 1,1,2-Trichloroethane	5.51	83	27833	11.24	ppb		98
71) Tetrachloroethene	5.65	166	44144	8.76	ppb		88
72) 2-Hexanone	5.70	43	22492	12.80	ppb		88
73) N-Butyl Acetate	5.80	43	60708	14.04	ppb		98
74) 1,3-Dichloropropane	5.66	76	61938	11.61	ppb		98
75) Dibromochloromethane	5.85	129	33528	9.52	ppb		99
76) 1,2-Dibromoethane	5.97	107	29478	9.80	ppb		96
77) Chlorobenzene	6.39	112	118214	9.29	ppb		96
78) 1,1,1,2-Tetrachloroethane	6.46	131	38327	9.38	ppb		97
79) Ethylbenzene	6.48	91	219215	10.18	ppb		99
80) (m+p)Xylene	6.58	106	157465	18.68	ppb		97
81) o-Xylene	6.96	106	77002	9.54	ppb		98
82) Styrene	6.96	104	124876	9.65	ppb		95
84) Bromoform	7.16	173	18027	10.67	ppb		97
85) Isopropylbenzene	7.29	105	181772	9.16	ppb		97
86) Cyclohexanone	7.41	55	63388	234.76	ppb		97
87) 1,1,2,2-Tetrachloroethane	7.58	83	33901	10.44	ppb		90
88) Trans-1,4-Dichloro-2-buten	7.64	53	8134	13.53	ppb		99
89) 1,2,3-Trichloropropane	7.63	110	9111	9.91	ppb		98
90) n-Propylbenzene	7.69	91	223433	9.69	ppb		99
91) Bromobenzene	7.61	156	45215	9.74	ppb		96
93) 1,3,5-Trimethylbenzene	7.86	105	150703	9.37	ppb		99
94) 2-Chlorotoluene	7.78	91	143065	10.53	ppb		94
95) 4-Chlorotoluene	7.89	91	157852	10.40	ppb		98
96) tert-Butylbenzene	8.18	119	115096	8.14	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1088.D
Acq On : 17 Jul 2009 1:05 pm
Sample : 10 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009

Vial: 11
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:53:52 2009
Response via : Initial Calibration
DataAcq Meth : W071709

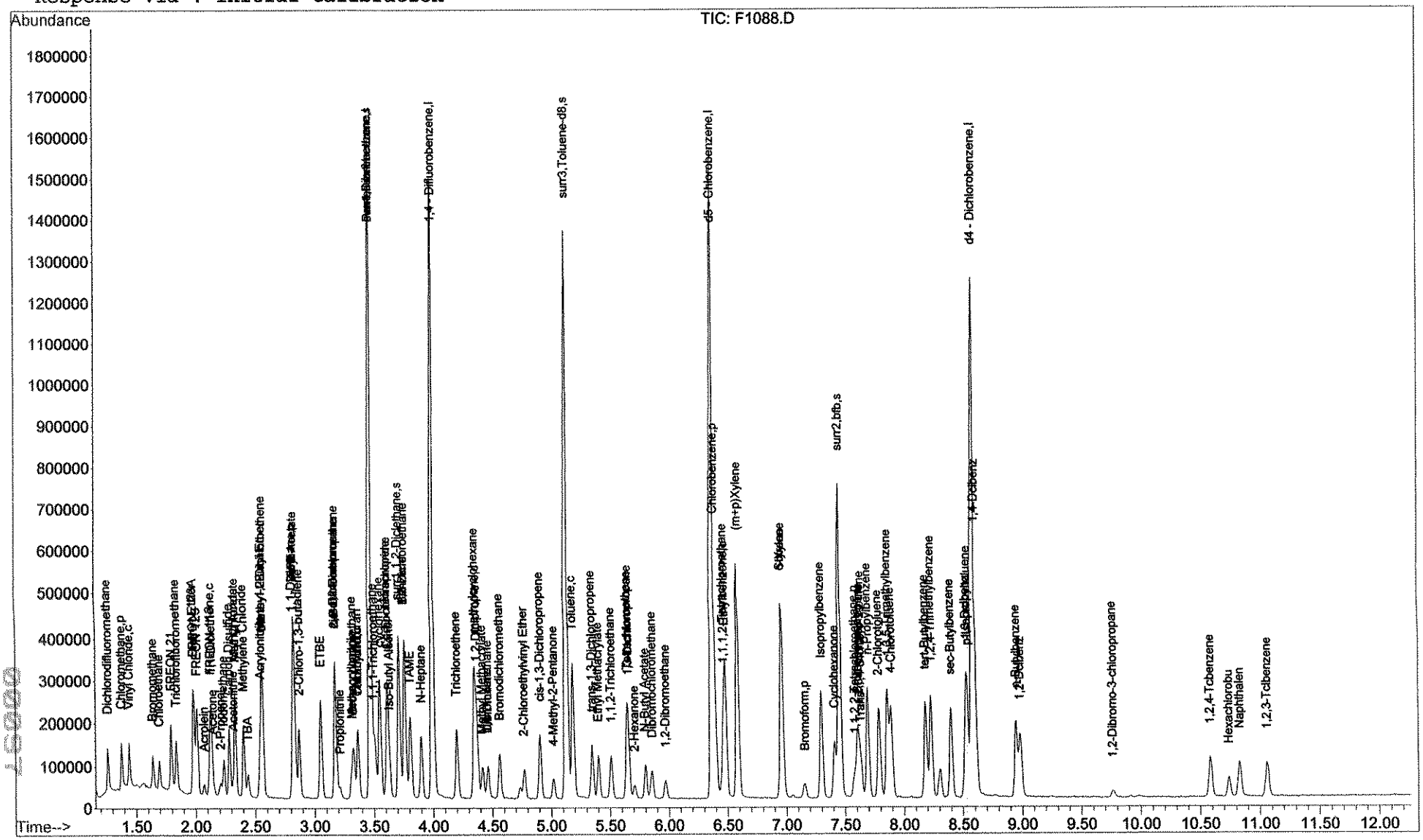
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	149159	9.39	ppb	97
98)	sec-Butylbenzene	8.40	105	166466	7.81	ppb	98
99)	p-Isopropyltoluene	8.54	119	132954	7.84	ppb	96
100)	1,3-Dclbenz	8.52	146	77975	9.25	ppb	96
101)	1,4-Dclbenz	8.61	146	78663	9.31	ppb	97
103)	n-Butylbenzene	8.95	91	118115	8.11	ppb	98
104)	1,2-Dclbenz	8.99	146	69796	9.35	ppb	96
105)	1,2-Dibromo-3-chloropropan	9.76	157	5106	9.16	ppb	88
107)	1,2,4-Tcbenzene	10.58	180	35277	7.90	ppb	98
108)	Hexachlorobu	10.74	225	9367	4.92	ppb	96
109)	Naphthalen	10.83	128	82374	8.96	ppb	97
110)	1,2,3-Tclbenzene	11.06	180	31485	8.08	ppb	95

(#) = qualifier out of range (m) = manual integration
F1088.D W071709.M Fri Jul 17 14:19:07 2009

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1088.D Vial: 11
Acq On : 17 Jul 2009 1:05 pm Operator: D.ZIMPFER
Sample : 10 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:56 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D Vial: 12
Acq On : 17 Jul 2009 1:34 pm Operator: D.ZIMPFER
Sample : 50 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:51 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:51:59 2009
Response via : Initial Calibration
DataAcq Meth : W071709

D27.7

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	602643	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	4.00	114	972571	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	821606	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.58	152	356633	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	295249	52.75	ppb		0.00
Spiked Amount 50.000			Recovery =	105.50%			
48) surr1,1,2-Diclethane	3.71	65	276943	59.99	ppb		0.00
Spiked Amount 50.000			Recovery =	119.98%			
69) surr3,Toluene-d8	5.13	98	1115570	57.55	ppb		0.00
Spiked Amount 50.000			Recovery =	115.10%			
70) surr2,bfb	7.45	95	416115	57.63	ppb		0.00
Spiked Amount 50.000			Recovery =	115.26%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	275455	61.64	ppb		99
4) Chloromethane	1.37	50	318190	61.23	ppb		98
5) Vinyl Chloride	1.44	62	329041	59.11	ppb		99
6) Bromomethane	1.64	96	187618	47.48	ppb		100
7) Chloroethane	1.69	64	217786	49.34	ppb		96
8) FREON 21	1.79	67	468213	46.67	ppb		99
9) Trichlorofluoromethane	1.83	101	313072	45.38	ppb		99
10) Diethyl Ether	1.99	59	183767	60.63	ppb		97
11) FREON 123A	1.98	85	121779	43.55	ppb		85
12) FREON 123	2.01	85	235569	47.75	ppb		98
13) Acrolein	2.07	56	73511	264.97	ppb		94
14) FREON 113	2.12	85	98132	48.86	ppb		85
15) 1,1-Diclethene	2.13	96	225835	49.97	ppb		85
16) Acetone	2.15	43	37183	31.04	ppb		98
17) 2-Propanol	2.21	45	143136	1120.40	ppb		98
18) Iodomethane	2.23	127	147266	53.06	ppb		89
19) Carbon Disulfide	2.28	76	740458	49.14	ppb		98
20) Acetonitrile	2.31	40	42210	225.40	ppb	#	67
21) Allyl Chloride	2.33	76	164838	60.19	ppb		57
22) Methyl Acetate	2.33	43	164742	60.33	ppb		99
23) Methylene Chloride	2.40	84	278323	53.48	ppb		86
24) TBA	2.44	59	198492	1035.77	ppb		99
25) Acrylonitrile	2.54	53	279454	308.83	ppb		91
26) Methyl-t-Butyl Ether	2.56	73	539771	57.75	ppb		99
27) trans-1,2-Dichloroethene	2.56	96	265050	51.02	ppb		90
28) 1,1-Diclethane	2.82	63	500109	58.22	ppb		99
29) DIPE	2.83	45	1017243	65.02	ppb	#	95
30) Vinyl Acetate	2.82	86	27305	50.95	ppb	#	48
31) 2-Chloro-1,3-butadiene	2.87	53	366617	55.30	ppb		94
32) ETBE	3.05	59	724892	56.12	ppb		96
33) 2,2-Dichloropropane	3.18	77	394389	58.09	ppb		97
34) 2-Butanone	3.17	43	69044	56.72	ppb		98
35) cis-1,2-Dichloroethene	3.17	96	289864	50.63	ppb		90
36) Propionitrile	3.21	54	86854	302.29	ppb		100
37) Methacrylonitrile	3.31	67	59976	53.74	ppb		70

(#) = qualifier out of range (m) = manual integration
F1089.D W071709.M Fri Jul 17 14:19:36 2009

00098

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D Vial: 12
Acq On : 17 Jul 2009 1:34 pm Operator: D.ZIMPFER
Sample : 50 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:51 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:51:59 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	Bromochloromethane	3.33	128	112708	44.61	ppb	#	73
39)	Chloroform	3.36	83	458639	54.42	ppb		96
40)	Tetrahydrofuran	3.37	42	44976	59.26	ppb		87
41)	1,1,1-Trichloroethane	3.51	97	351885	52.10	ppb		98
44)	cyclohexane	3.55	56	472345	61.52	ppb		88
45)	Carbontetrachloride	3.62	117	272396	51.79	ppb		99
46)	1,1-Dichloropropene	3.61	75	367057	56.90	ppb		100
47)	Iso-Butyl Alcohol	3.63	43	109894	1257.98	ppb		99
49)	Benzene	3.76	78	1114698	58.93	ppb		98
50)	1,2-Dichloroethane	3.76	62	265985	54.19	ppb		99
51)	TAME	3.81	73	590034	59.22	ppb		96
52)	N-Heptane	3.90	43	473757	75.07	ppb		88
53)	Trichloroethene	4.20	95	258000	49.45	ppb		88
54)	methylcyclohexane	4.35	55	383473	58.48	ppb		88
55)	1,2-Diclpropane	4.37	63	275237	61.85	ppb		99
56)	Methyl Methacrylate	4.42	69	111337	58.95	ppb	#	78
57)	1,4-Dioxane	4.46	88	18136	895.24	ppb		100
58)	Dibromomethane	4.46	93	122793	51.64	ppb		92
59)	Bromodichloromethane	4.56	83	316331	56.61	ppb		93
61)	2-Chloroethylvinyl Ether	4.77	63	118192	59.25	ppb		89
62)	cis-1,3-Dichloropropene	4.90	75	402679	60.06	ppb	#	86
64)	4-Methyl-2-Pentanone	5.02	43	155603	65.89	ppb		92
65)	Toluene	5.18	91	1089733	54.25	ppb		100
66)	trans-1,3-Dichloropropene	5.34	75	322745	62.85	ppb		100
67)	Ethyl Methacrylate	5.40	69	237081	62.97	ppb		93
68)	1,1,2-Trichloroethane	5.51	83	141612	57.58	ppb		89
71)	Tetrachloroethene	5.64	166	239175	46.70	ppb		97
72)	2-Hexanone	5.70	43	102847	60.97	ppb		94
73)	N-Butyl Acetate	5.80	43	284289	68.63	ppb		92
74)	1,3-Dichloropropane	5.66	76	314490	59.92	ppb		87
75)	Dibromochloromethane	5.85	129	178385	50.03	ppb		94
76)	1,2-Dibromoethane	5.97	107	152884	50.33	ppb		97
77)	Chlorobenzene	6.40	112	633010	49.17	ppb		91
78)	1,1,1,2-Tetrachloroethane	6.46	131	203640	49.55	ppb		95
79)	Ethylbenzene	6.48	91	1199879	55.95	ppb		96
80)	(m+p)Xylene	6.58	106	875528	103.05	ppb		85
81)	o-Xylene	6.96	106	417124	51.18	ppb		85
82)	Styrene	6.97	104	682547	52.51	ppb		95
84)	Bromoform	7.15	173	93616	55.30	ppb		98
85)	Isopropylbenzene	7.30	105	1058287	53.32	ppb		97
86)	Cyclohexanone	7.41	55	279083	1046.73	ppb		84
87)	1,1,2,2-Tetrachloroethane	7.58	83	167307	51.94	ppb		99
88)	Trans-1,4-Dichloro-2-buten	7.64	53	36826	63.24	ppb		94
89)	1,2,3-Trichloropropane	7.63	110	44565	48.13	ppb		98
90)	n-Propylbenzene	7.69	91	1345234	59.03	ppb		94
91)	Bromobenzene	7.61	156	231346	49.65	ppb	#	83
93)	1,3,5-Trimethylbenzene	7.86	105	867502	53.95	ppb		95
94)	2-Chlorotoluene	7.79	91	776998	57.69	ppb		93
95)	4-Chlorotoluene	7.89	91	876854	58.42	ppb		94
96)	tert-Butylbenzene	8.18	119	727989	51.06	ppb		87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D
Acq On : 17 Jul 2009 1:34 pm
Sample : 50 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:51 2009

Vial: 12
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 13:51:59 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	858491	54.06	ppb		95
98)	sec-Butylbenzene	8.40	105	1127417	52.53	ppb		100
99)	p-Isopropyltoluene	8.54	119	895329	52.40	ppb		95
100)	1,3-Dclbenz	8.52	146	435615	51.39	ppb		99
101)	1,4-Dclbenz	8.61	146	424895	49.84	ppb		98
103)	n-Butylbenzene	8.95	91	863040	59.38	ppb		98
104)	1,2-Dclbenz	8.98	146	382289	50.69	ppb		99
105)	1,2-Dibromo-3-chloropropan	9.77	157	26788	47.45	ppb		94
107)	1,2,4-Tcbenzene	10.58	180	217785	48.29	ppb		100
108)	Hexachlorobu	10.73	225	89788	46.36	ppb		98
109)	Naphthalen	10.82	128	425126	45.43	ppb	#	95
110)	1,2,3-Tclbenzene	11.05	180	182338	46.21	ppb		99

(#) = qualifier out of range (m) = manual integration

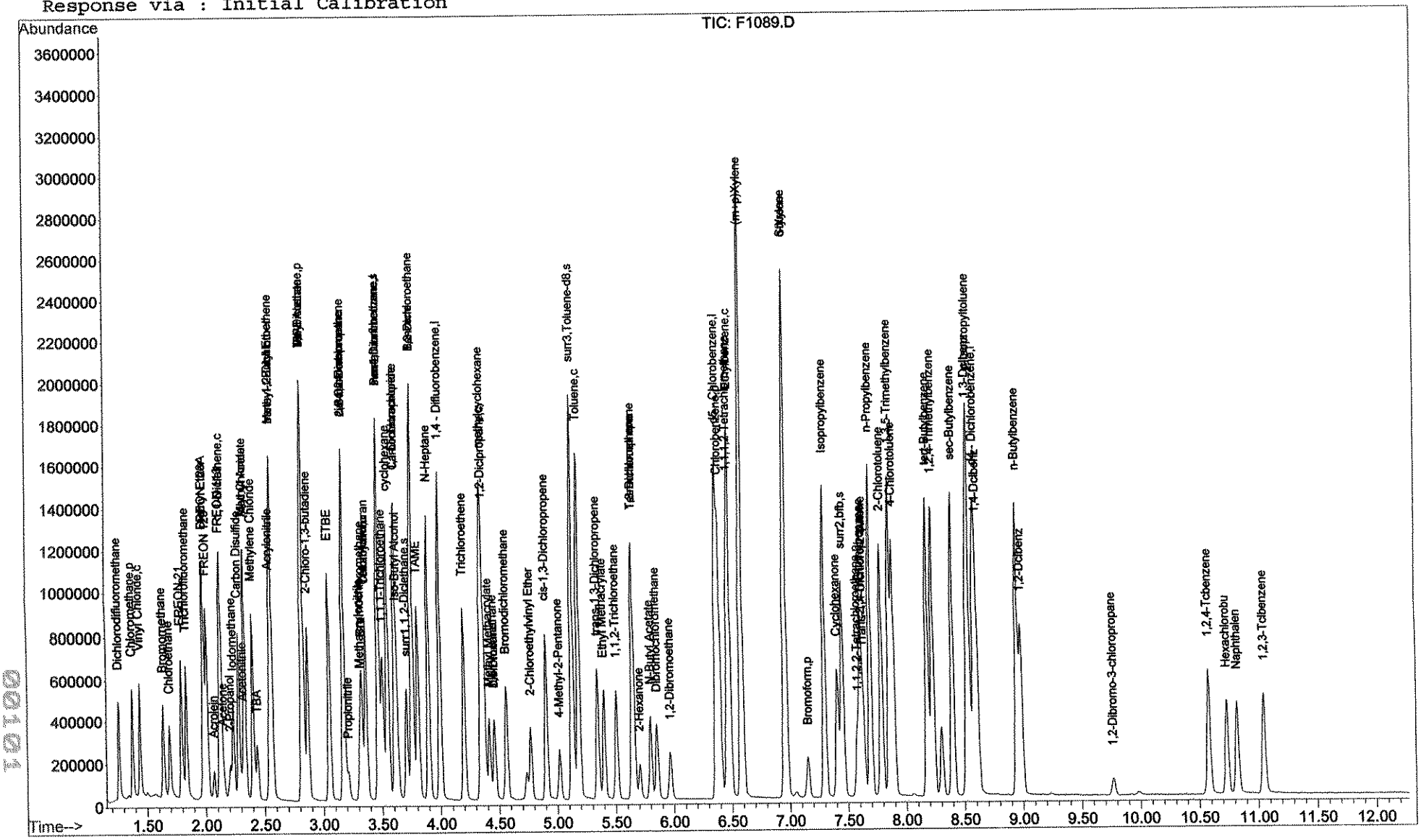
Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D
Acq On : 17 Jul 2009 1:34 pm
Sample : 50 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 13:51 2009

Vial: 12
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:04:49 2009
Response via : Initial Calibration



F1089.D W071709.M Fri Jul 17 14:19:42 2009

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D Vial: 12
Acq On : 17 Jul 2009 1:34 pm Operator: D.ZIMPFER
Sample : 50 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:36 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

0717

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.47	168	602643	50.00	ppb	0.00
42) 1,4 - Difluorobenzene	4.00	114	972571	50.00	ppb	0.00
63) d5 - Chlorobenzene	6.37	117	821606	50.00	ppb	0.00
83) d4 - Dichlorobenzene	8.58	152	356633	50.00	ppb	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	3.47	113	295249	52.55	ppb	0.00
Spiked Amount 50.000			Recovery =	105.10%		
48) surr1,1,2-Diclethane	3.71	65	276943	55.45	ppb	0.00
Spiked Amount 50.000			Recovery =	110.90%		
69) surr3,Toluene-d8	5.13	98	1118530	53.64	ppb	0.00
Spiked Amount 50.000			Recovery =	107.28%		
70) surr2,bfb	7.45	95	413659	53.14	ppb	0.00
Spiked Amount 50.000			Recovery =	106.28%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.26	85	275455	49.72	ppb	100
4) Chloromethane	1.37	50	318190	46.63	ppb	100
5) Vinyl Chloride	1.44	62	328458	48.83	ppb	100
6) Bromomethane	1.64	96	187618	48.88	ppb	100
7) Chloroethane	1.69	64	217786	46.27	ppb	100
8) FREON 21	1.79	67	468213	43.67	ppb	100
9) Trichlorofluoromethane	1.83	101	313072	46.86	ppb	100
10) Diethyl Ether	1.99	59	183767	49.67	ppb	100
11) FREON 123A	1.98	85	121779	43.04	ppb	100
12) FREON 123	2.01	85	235569	45.17	ppb	100
13) Acrolein	2.07	56	73511	203.59	ppb	100
14) FREON 113	2.12	85	98132	48.43	ppb	100
15) 1,1-Diclethene	2.13	96	225835	45.88	ppb	100
16) Acetone	2.15	43	37183	35.63	ppb	100
17) 2-Propanol	2.21	45	143022	999.23	ppb	100
18) Iodomethane	2.23	127	147266	56.74	ppb	100
19) Carbon Disulfide	2.28	76	740458	45.61	ppb	100
20) Acetonitrile	2.31	40	42210	202.95	ppb	100
21) Allyl Chloride	2.33	76	164838	52.90	ppb	100
22) Methyl Acetate	2.33	43	164742	43.71	ppb	100
23) Methylene Chloride	2.40	84	278323	49.71	ppb	100
24) TBA	2.44	59	198492	959.89	ppb	100
25) Acrylonitrile	2.54	53	279454	251.55	ppb	100
26) Methyl-t-Butyl Ether	2.56	73	539771	50.69	ppb	100
27) trans-1,2-Dichloroethene	2.56	96	265050	47.20	ppb	100
28) 1,1-Diclethane	2.82	63	500109	49.31	ppb	100
29) DIPE	2.83	45	1017243	48.59	ppb	100
30) Vinyl Acetate	2.82	86	27305	47.06	ppb	100
31) 2-Chloro-1,3-butadiene	2.87	53	366617	47.83	ppb	100
32) ETBE	3.05	59	724892	47.17	ppb	100
33) 2,2-Dichloropropane	3.18	77	394389	49.54	ppb	100
34) 2-Butanone	3.17	43	69044	35.39	ppb	100
35) cis-1,2-Dichloroethene	3.17	96	289864	46.49	ppb	100
36) Propionitrile	3.21	54	86854	224.17	ppb	100
37) Methacrylonitrile	3.31	67	59976	47.54	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D Vial: 12
Acq On : 17 Jul 2009 1:34 pm Operator: D.ZIMPFER
Sample : 50 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:36 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) Bromochloromethane	3.33	128	112708	46.17	ppb	100
39) Chloroform	3.36	83	458639	48.41	ppb	100
40) Tetrahydrofuran	3.37	42	44976	47.70	ppb	100
41) 1,1,1-Trichloroethane	3.51	97	351885	46.60	ppb	100
44) cyclohexane	3.55	56	472345	47.22	ppb	100
45) Carbontetrachloride	3.62	117	272396	48.25	ppb	100
46) 1,1-Dichloropropene	3.61	75	367057	48.56	ppb	100
47) Iso-Butyl Alcohol	3.63	43	109894	751.09	ppb	100
49) Benzene	3.76	78	1114698	50.38	ppb	100
50) 1,2-Dichloroethane	3.76	62	265985	50.56	ppb	100
51) TAME	3.81	73	590034	50.07	ppb	100
52) N-Heptane	3.90	43	473757	53.43	ppb	100
53) Trichloroethene	4.20	95	258000	47.48	ppb	100
54) methylcyclohexane	4.35	55	383473	46.94	ppb	100
55) 1,2-Diclpropane	4.37	63	273071	50.22	ppb	100
56) Methyl Methacrylate	4.42	69	111337	47.43	ppb	100
57) 1,4-Dioxane	4.46	88	18136	854.52	ppb	100
58) Dibromomethane	4.46	93	122671	46.23	ppb	100
59) Bromodichloromethane	4.56	83	316331	49.52	ppb	100
61) 2-Chloroethylvinyl Ether	4.77	63	118192	47.48	ppb	100
62) cis-1,3-Dichloropropene	4.90	75	402679	50.07	ppb	100
64) 4-Methyl-2-Pentanone	5.02	43	155603	46.64	ppb	100
65) Toluene	5.18	91	1091317	48.69	ppb	100
66) trans-1,3-Dichloropropene	5.34	75	322745	50.32	ppb	100
67) Ethyl Methacrylate	5.40	69	237081	50.62	ppb	100
68) 1,1,2-Trichloroethane	5.51	83	141612	48.27	ppb	100
71) Tetrachloroethene	5.64	166	239175	48.14	ppb	100
72) 2-Hexanone	5.70	43	111300	40.58	ppb	100
73) N-Butyl Acetate	5.80	43	284289	47.46	ppb	100
74) 1,3-Dichloropropane	5.66	76	314490	49.77	ppb	100
75) Dibromochloromethane	5.85	129	178385	49.01	ppb	100
76) 1,2-Dibromoethane	5.97	107	154060	50.19	ppb	100
77) Chlorobenzene	6.40	112	633010	47.98	ppb	100
78) 1,1,1,2-Tetrachloroethane	6.46	131	203640	49.30	ppb	100
79) Ethylbenzene	6.48	91	1199879	49.53	ppb	100
80) (m+p)Xylene	6.58	106	877446	99.01	ppb	100
81) o-Xylene	6.96	106	417124	49.36	ppb	100
82) Styrene	6.97	104	682547	49.94	ppb	100
84) Bromoform	7.15	173	93616	50.48	ppb	100
85) Isopropylbenzene	7.30	105	1058287	49.71	ppb	100
86) Cyclohexanone	7.41	55	279083	858.64	ppb	100
87) 1,1,2,2-Tetrachloroethane	7.58	83	167307	48.55	ppb	100
88) Trans-1,4-Dichloro-2-buten	7.64	53	36826	51.74	ppb	100
89) 1,2,3-Trichloropropane	7.63	110	44565	50.18	ppb	100
90) n-Propylbenzene	7.69	91	1345234	50.84	ppb	100
91) Bromobenzene	7.61	156	231346	48.53	ppb	100
93) 1,3,5-Trimethylbenzene	7.86	105	868480	49.26	ppb	100
94) 2-Chlorotoluene	7.79	91	776998	49.77	ppb	100
95) 4-Chlorotoluene	7.89	91	873938	50.36	ppb	100
96) tert-Butylbenzene	8.18	119	727989	49.43	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D Vial: 12
Acq On : 17 Jul 2009 1:34 pm Operator: D.ZIMPFER
Sample : 50 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:36 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	858491	49.83	ppb	100
98)	sec-Butylbenzene	8.40	105	1123402	50.80	ppb	100
99)	p-Isopropyltoluene	8.54	119	891308	50.60	ppb	100
100)	1,3-Dclbenz	8.52	146	435615	50.11	ppb	100
101)	1,4-Dclbenz	8.61	146	422972	48.77	ppb	100
103)	n-Butylbenzene	8.95	91	859466	52.58	ppb	100
104)	1,2-Dclbenz	8.98	146	383877	49.64	ppb	100
105)	1,2-Dibromo-3-chloropropan	9.77	157	26788	49.68	ppb	100
107)	1,2,4-Tcbenzene	10.58	180	217785	51.82	ppb	100
108)	Hexachlorobu	10.73	225	89788	50.78	ppb	100
109)	Naphthalen	10.82	128	425126	47.31	ppb	100
110)	1,2,3-Tclbenzene	11.05	180	179809	49.30	ppb	100

(#) = qualifier out of range (m) = manual integration
F1089.D W071709.M Fri Jul 17 16:44:46 2009

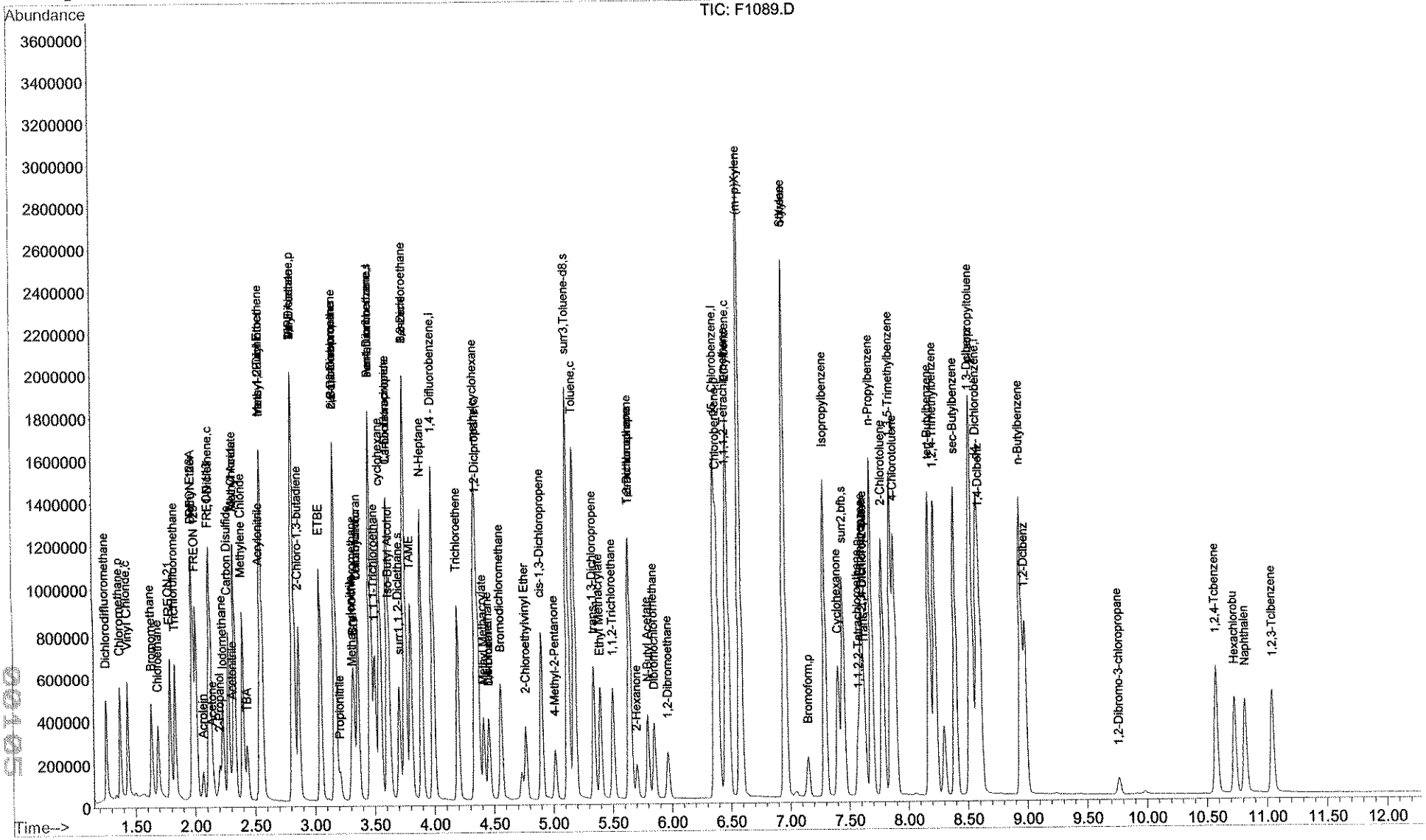
Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1089.D
Acq On : 17 Jul 2009 1:34 pm
Sample : 50 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:36 2009

Vial: 12
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 16:44:21 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D Vial: 13
Acq On : 17 Jul 2009 2:36 pm Operator: D.ZIMPFER
Sample : 100 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:51 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

7.17

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.47	168	593021	50.00	ppb	0.00
42) 1,4 - Difluorobenzene	3.99	114	958890	50.00	ppb	0.00
63) d5 - Chlorobenzene	6.37	117	819499	50.00	ppb	0.00
83) d4 - Dichlorobenzene	8.58	152	353096	50.00	ppb	0.00
System Monitoring Compounds						
43) surr4,Dibrflmethane	3.47	113	586625	105.90	ppb	0.00
Spiked Amount 50.000			Recovery =	211.80%		
48) surr1,1,2-Diclethane	3.71	65	537299	109.12	ppb	0.00
Spiked Amount 50.000			Recovery =	218.24%		
69) surr3,Toluene-d8	5.13	98	2230214	107.23	ppb	0.00
Spiked Amount 50.000			Recovery =	214.46%		
70) surr2,bfb	7.45	95	827199	106.54	ppb	0.00
Spiked Amount 50.000			Recovery =	213.08%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.26	85	562013	103.09	ppb	98
4) Chloromethane	1.37	50	664983	99.04	ppb	99
5) Vinyl Chloride	1.43	62	672410	101.58	ppb	98
6) Bromomethane	1.63	96	394266	104.39	ppb	98
7) Chloroethane	1.69	64	433854	93.66	ppb	98
8) FREON 21	1.79	67	955069	90.53	ppb	100
9) Trichlorofluoromethane	1.83	101	661491	100.62	ppb	99
10) Diethyl Ether	1.99	59	374361	102.83	ppb	98
11) FREON 123A	1.98	85	267233	95.97	ppb	86
12) FREON 123	2.01	85	452074	88.10	ppb	94
13) Acrolein	2.07	56	149675	421.25	ppb	95
14) FREON 113	2.11	85	212699	106.67	ppb	97
15) 1,1-Diclethene	2.13	96	467990	96.63	ppb	95
16) Acetone	2.15	43	74618	72.67	ppb	93
17) 2-Propanol	2.20	45	300240	2131.67	ppb	97
18) Iodomethane	2.23	127	273448	107.07	ppb	99
19) Carbon Disulfide	2.28	76	1490867	93.32	ppb	99
20) Acetonitrile	2.32	40	110564m	540.22	ppb	
21) Allyl Chloride	2.33	76	343967	112.17	ppb	99
22) Methyl Acetate	2.33	43	318900	85.99	ppb	100
23) Methylene Chloride	2.40	84	559655	101.57	ppb	97
24) TBA	2.44	59	417226	2050.41	ppb	97
25) Acrylonitrile	2.54	53	575225	526.20	ppb	100
26) Methyl-t-Butyl Ether	2.55	73	1090430	104.06	ppb	98
27) trans-1,2-Dichloroethene	2.56	96	550116	99.55	ppb	97
28) 1,1-Diclethane	2.81	63	1007659	100.97	ppb	99
29) DIPE	2.82	45	2088126	101.37	ppb	95
30) Vinyl Acetate	2.82	86	54155	94.86	ppb	87
31) 2-Chloro-1,3-butadiene	2.87	53	721349	95.63	ppb	99
32) ETBE	3.05	59	1490128	98.53	ppb	100
33) 2,2-Dichloropropane	3.17	77	797218	101.76	ppb	99
34) 2-Butanone	3.17	43	138945	72.37	ppb	98
35) cis-1,2-Dichloroethene	3.17	96	595606	97.07	ppb	97
36) Propionitrile	3.21	54	181225	475.34	ppb	99
37) Methacrylonitrile	3.31	67	122418	98.61	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D
Acq On : 17 Jul 2009 2:36 pm
Sample : 100 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:51 2009

Vial: 13
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) Bromochloromethane	3.32	128	226895	94.45	ppb	97
39) Chloroform	3.36	83	926320	99.36	ppb	99
40) Tetrahydrofuran	3.37	42	88358	95.23	ppb	99
41) 1,1,1-Trichloroethane	3.50	97	729495	98.18	ppb	97
44) cyclohexane	3.55	56	974310	98.79	ppb	100
45) Carbontetrachloride	3.62	117	560071	100.62	ppb	100
46) 1,1-Dichloropropene	3.61	75	764425	102.57	ppb	100
47) Iso-Butyl Alcohol	3.63	43	231770	1606.67	ppb	98
49) Benzene	3.76	78	2248267	103.07	ppb	99
50) 1,2-Dichloroethane	3.76	62	519317	100.13	ppb	97
51) TAME	3.81	73	1163666	100.15	ppb	99
52) N-Heptane	3.90	43	1040648	119.04	ppb	99
53) Trichloroethene	4.20	95	527132	98.39	ppb	99
54) methylcyclohexane	4.35	55	764404	94.90	ppb	98
55) 1,2-Diclpropane	4.37	63	553935	103.33	ppb	98
56) Methyl Methacrylate	4.41	69	222590	96.19	ppb	93
57) 1,4-Dioxane	4.46	88	40273	1924.62	ppb	98
58) Dibromomethane	4.46	93	239816	91.66	ppb	96
59) Bromodichloromethane	4.56	83	641841	101.92	ppb	98
61) 2-Chloroethylvinyl Ether	4.77	63	231231	94.21	ppb	99
62) cis-1,3-Dichloropropene	4.91	75	807796	101.88	ppb	97
64) 4-Methyl-2-Pentanone	5.01	43	312821	94.00	ppb	96
65) Toluene	5.18	91	2230962	99.78	ppb	100
66) trans-1,3-Dichloropropene	5.35	75	645668	100.92	ppb	99
67) Ethyl Methacrylate	5.40	69	483335	103.46	ppb	99
68) 1,1,2-Trichloroethane	5.51	83	280646	95.91	ppb	99
71) Tetrachloroethene	5.64	166	499991	100.89	ppb	99
72) 2-Hexanone	5.71	43	209910	76.74	ppb	100
73) N-Butyl Acetate	5.80	43	572609	95.85	ppb	99
74) 1,3-Dichloropropane	5.65	76	638185	101.26	ppb	98
75) Dibromochloromethane	5.85	129	367004	101.09	ppb	99
76) 1,2-Dibromoethane	5.97	107	307805	100.53	ppb	99
77) Chlorobenzene	6.39	112	1312779	99.77	ppb	97
78) 1,1,1,2-Tetrachloroethane	6.46	131	416802	101.16	ppb	99
79) Ethylbenzene	6.48	91	2532696	104.82	ppb	99
80) (m+p)Xylene	6.59	106	1829444	206.96	ppb	92
81) o-Xylene	6.96	106	858380	101.85	ppb	100
82) Styrene	6.96	104	1414919	103.80	ppb	99
84) Bromoform	7.15	173	192585	104.88	ppb	98
85) Isopropylbenzene	7.30	105	2208267	104.76	ppb	99
86) Cyclohexanone	7.41	55	530105	1647.28	ppb	98
87) 1,1,2,2-Tetrachloroethane	7.58	83	334150	97.94	ppb	98
88) Trans-1,4-Dichloro-2-buten	7.63	53	75912	107.73	ppb	100
89) 1,2,3-Trichloropropane	7.63	110	88958	101.17	ppb	97
90) n-Propylbenzene	7.69	91	2823405	107.77	ppb	100
91) Bromobenzene	7.61	156	472617	100.13	ppb	97
93) 1,3,5-Trimethylbenzene	7.86	105	1803471	103.32	ppb	99
94) 2-Chlorotoluene	7.79	91	1613314	104.37	ppb	100
95) 4-Chlorotoluene	7.89	91	1826127	106.29	ppb	99
96) tert-Butylbenzene	8.18	119	1490275	102.20	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D Vial: 13
Acq On : 17 Jul 2009 2:36 pm Operator: D.ZIMPFER
Sample : 100 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:51 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	1751598	102.68	ppb	99
98)	sec-Butylbenzene	8.40	105	2394770	109.37	ppb	99
99)	p-Isopropyltoluene	8.54	119	1878396	107.70	ppb	99
100)	1,3-Dclbenz	8.52	146	893779	103.83	ppb	98
101)	1,4-Dclbenz	8.61	146	870429	101.37	ppb	98
103)	n-Butylbenzene	8.94	91	1852681	114.47	ppb	99
104)	1,2-Dclbenz	8.98	146	770065	100.58	ppb	97
105)	1,2-Dibromo-3-chloropropan	9.77	157	52282	97.94	ppb	98
107)	1,2,4-Tcbenzene	10.57	180	461051	110.80	ppb	99
108)	Hexachlorobu	10.73	225	196720	112.38	ppb	99
109)	Naphthalen	10.82	128	866692	97.42	ppb	100
110)	1,2,3-Tclbenzene	11.04	180	373602	103.47	ppb	100

(#) = qualifier out of range (m) = manual integration

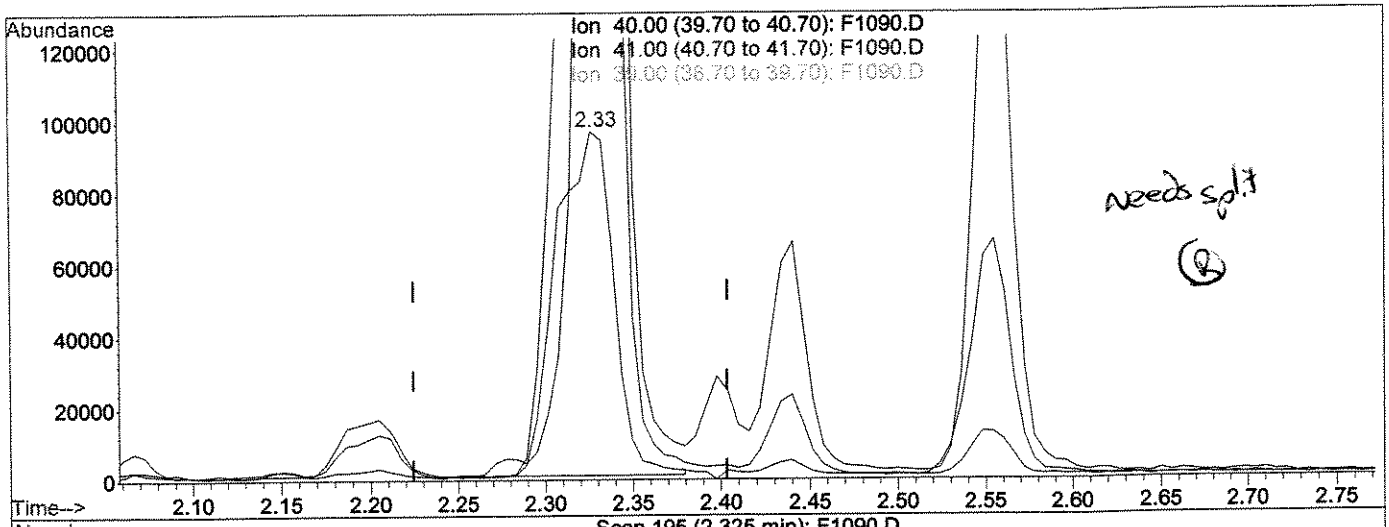
Quantitation Report (Qedit)

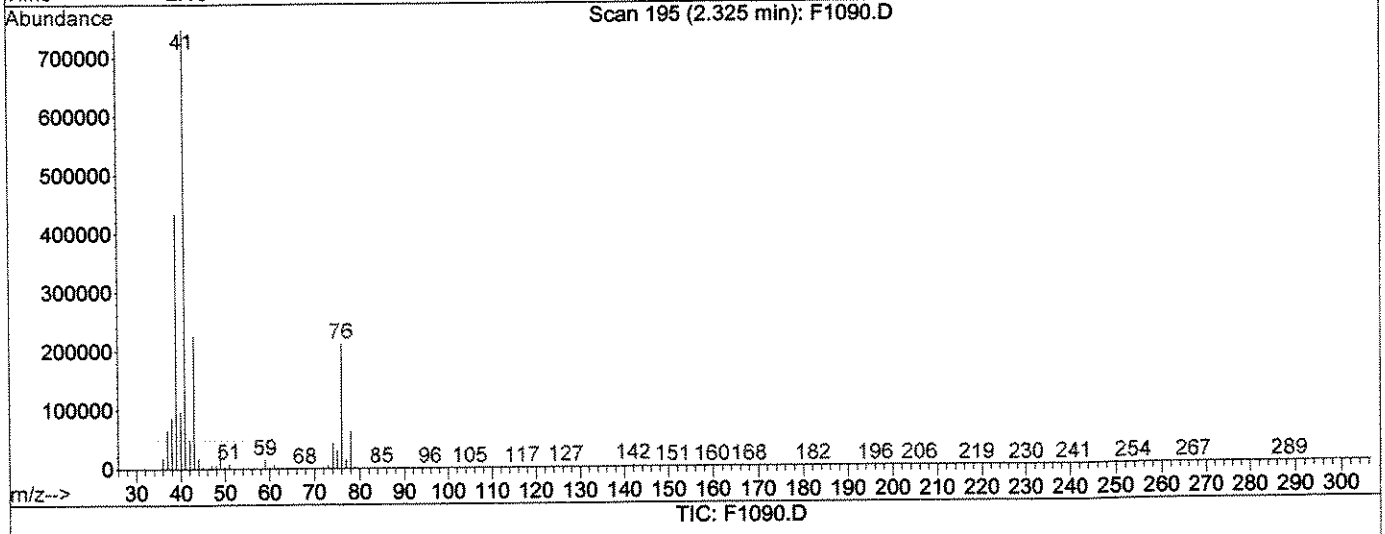
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D
Acq On : 17 Jul 2009 2:36 pm
Sample : 100 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:49 2009

Vial: 13
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Multiple Level Calibration





TIC: F1090.D

(20) Acetonitrile

2.33min 1061.77ppb

response 217306

Ion	Exp%	Act%
40.00	100	100
41.00	205.80	769.78#
39.00	51.30	446.02#
0.00	0.00	0.00

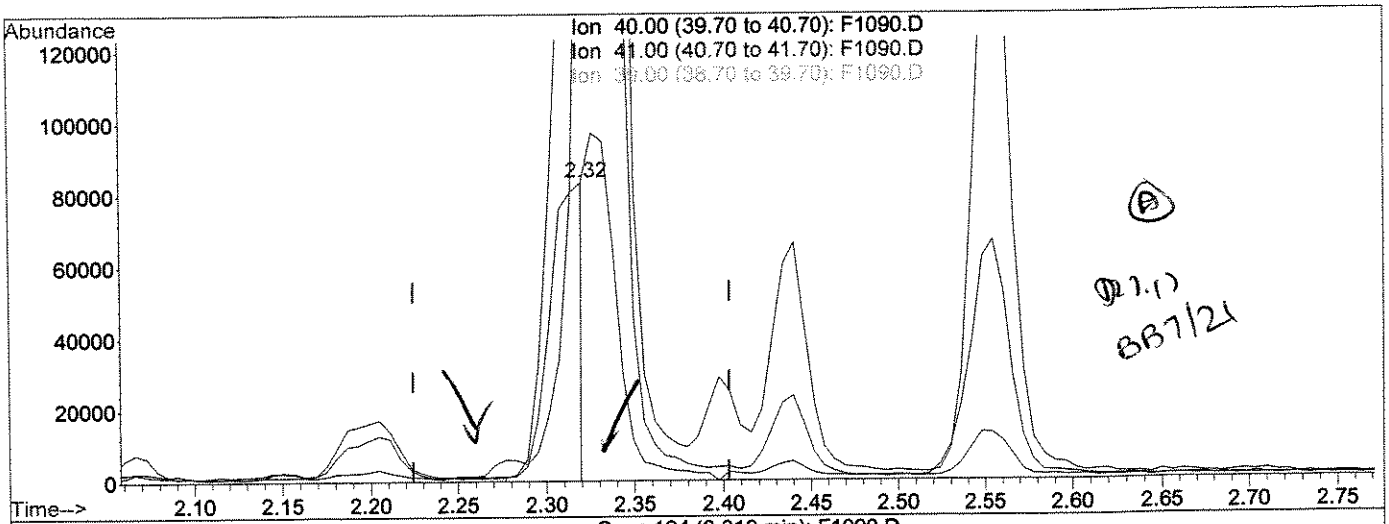
Quantitation Report (Qedit)

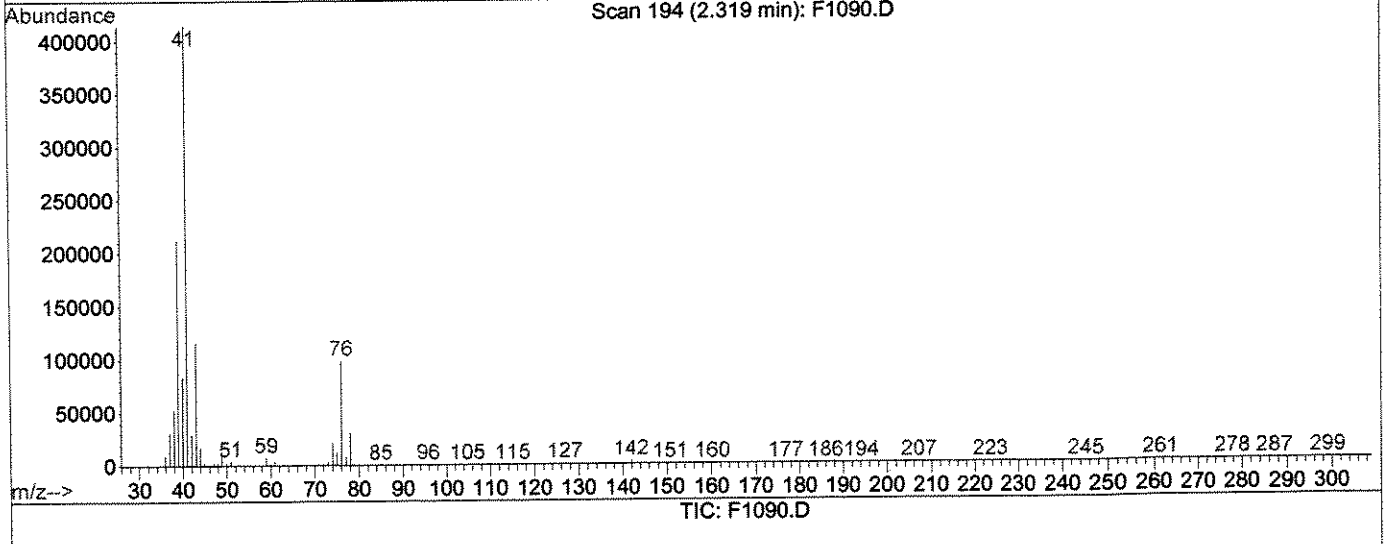
Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D
Acq On : 17 Jul 2009 2:36 pm
Sample : 100 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:51 2009

Vial: 13
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Multiple Level Calibration





TIC: F1090.D

(20) Acetonitrile

2.32min 540.22ppb m

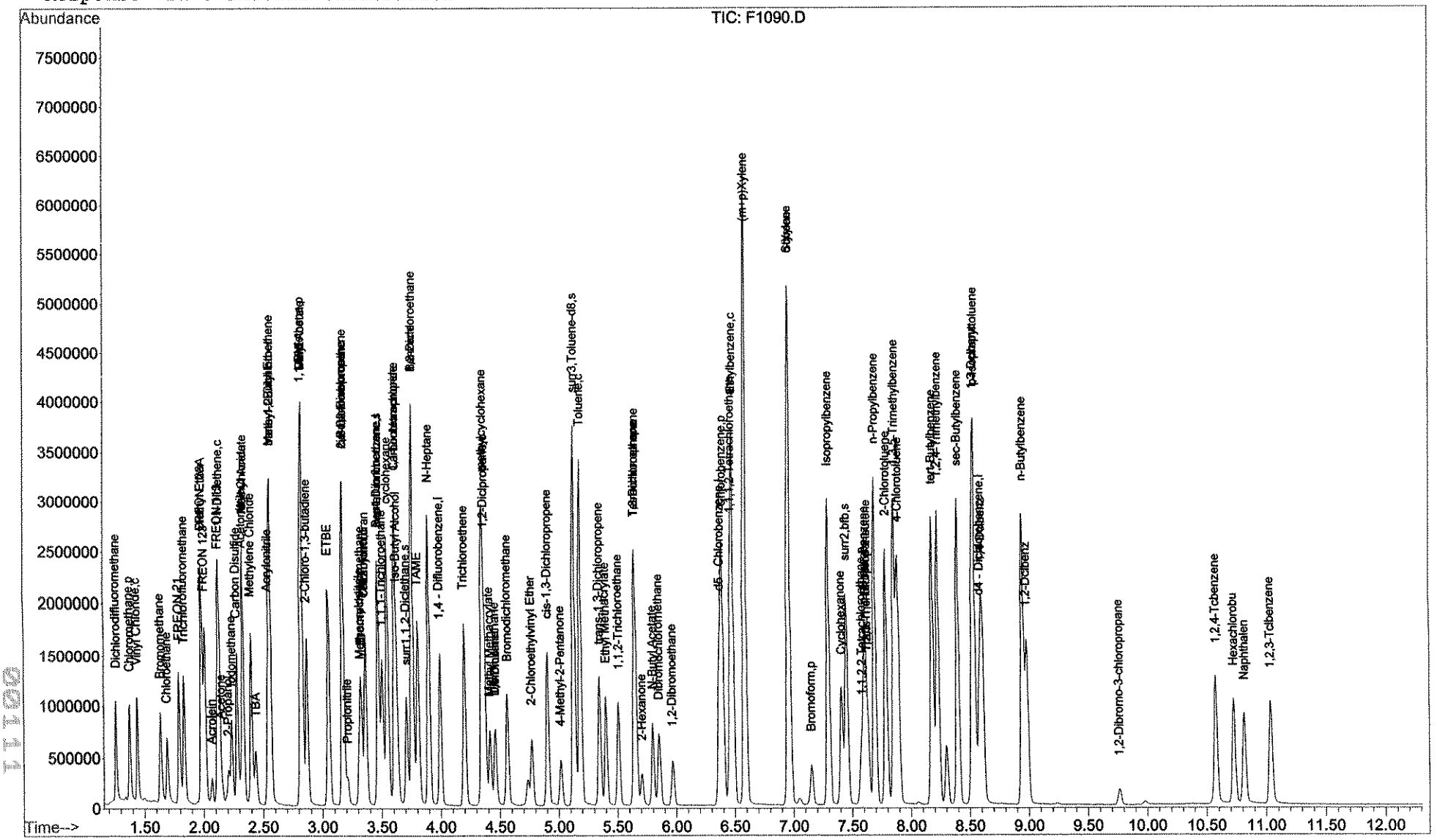
response 110564

Ion	Exp%	Act%
40.00	100	100
41.00	205.80	496.64#
39.00	51.30	254.62#
0.00	0.00	0.00

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1090.D Vial: 13
Acq On : 17 Jul 2009 2:36 pm Operator: D.ZIMPFER
Sample : 100 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 14:51 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D Vial: 14
Acq On : 17 Jul 2009 3:05 pm Operator: D.ZIMPFER
Sample : 200 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:17 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

D21.0

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.47	168	616260	50.00	ppb		0.00
42) 1,4 - Difluorobenzene	4.00	114	990411	50.00	ppb		0.00
63) d5 - Chlorobenzene	6.37	117	826701	50.00	ppb		0.00
83) d4 - Dichlorobenzene	8.59	152	348883	50.00	ppb		0.00
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.47	113	1188752	207.76	ppb		0.00
Spiked Amount 50.000			Recovery =	415.52%			
48) surr1,1,2-Diclethane	3.71	65	1076444	211.65	ppb		0.00
Spiked Amount 50.000			Recovery =	423.30%			
69) surr3,Toluene-d8	5.13	98	4481530	213.59	ppb		0.00
Spiked Amount 50.000			Recovery =	427.18%			
70) surr2,bfb	7.46	95	1614313	206.10	ppb		0.00
Spiked Amount 50.000			Recovery =	412.20%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.26	85	1214218	214.32	ppb		99
4) Chloromethane	1.37	50	1460700	209.35	ppb		98
5) Vinyl Chloride	1.44	62	1453480	211.30	ppb		99
6) Bromomethane	1.63	96	848119	216.09	ppb		97
7) Chloroethane	1.69	64	913456	189.76	ppb		99
8) FREON 21	1.79	67	2199255	200.61	ppb		99
9) Trichlorofluoromethane	1.83	101	1348445	197.38	ppb		98
10) Diethyl Ether	1.99	59	753281	199.11	ppb		98
11) FREON 123A	1.97	85	609081	210.49	ppb		89
12) FREON 123	2.01	85	1095078	205.35	ppb		99
13) Acrolein	2.06	56	319090	864.19	ppb		96
14) FREON 113	2.11	85	446653	215.56	ppb		98
15) 1,1-Diclethene	2.13	96	996354	197.96	ppb		93
16) Acetone	2.15	43	150978	141.49	ppb		93
17) 2-Propanol	2.21	45	632514	4321.44	ppb		98
18) Iodomethane	2.23	127	592892	223.39	ppb		99
19) Carbon Disulfide	2.28	76	3229506	194.52	ppb		99
20) Acetonitrile	2.32	40	443860	~~2086.94~~ 950.5	ppb	#	1
21) Allyl Chloride	2.33	76	710112	222.85	ppb		99
22) Methyl Acetate	2.33	43	656353	170.31	ppb		100
23) Methylene Chloride	2.40	84	1155763	201.85	ppb		97
24) TBA	2.44	59	885199	4186.17	ppb		97
25) Acrylonitrile	2.54	53	1173583	1033.08	ppb		99
26) Methyl-t-Butyl Ether	2.55	73	2166890	199.00	ppb		98
27) trans-1,2-Dichloroethene	2.56	96	1175917	204.76	ppb		98
28) 1,1-Diclethane	2.81	63	2097861	202.28	ppb		99
29) DIPE	2.83	45	4348035	203.11	ppb		95
30) Vinyl Acetate	2.82	86	110902	186.92	ppb		56
31) 2-Chloro-1,3-butadiene	2.86	53	1566423	199.83	ppb		100
32) ETBE	3.05	59	3141850	199.91	ppb		99
33) 2,2-Dichloropropane	3.18	77	1606397	197.32	ppb		99
34) 2-Butanone	3.17	43	278823	139.75	ppb		99
35) cis-1,2-Dichloroethene	3.17	96	1260251	197.65	ppb		94
36) Propionitrile	3.21	54	381554	963.04	ppb		100
37) Methacrylonitrile	3.31	67	253636	196.60	ppb		93

(#) = qualifier out of range (m) = manual integration
F1091.D W071709.M Fri Jul 17 15:18:16 2009

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D Vial: 14
Acq On : 17 Jul 2009 3:05 pm Operator: D.ZIMPFER
Sample : 200 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:17 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) Bromochloromethane	3.33	128	458696	183.75	ppb	98
39) Chloroform	3.36	83	1907119	196.86	ppb	100
40) Tetrahydrofuran	3.36	42	178603	185.24	ppb	99
41) 1,1,1-Trichloroethane	3.50	97	1539000	199.31	ppb	98
44) cyclohexane	3.55	56	2280712	223.90	ppb	100
45) Carbontetrachloride	3.62	117	1187481	206.54	ppb	98
46) 1,1-Dichloropropene	3.61	75	1632196	212.04	ppb	98
47) Iso-Butyl Alcohol	3.63	43	493385	3311.37	ppb	100
49) Benzene	3.76	78	4695945	208.43	ppb	100
50) 1,2-Dichloroethane	3.76	62	1028265	191.95	ppb	97
51) TAME	3.81	73	2491394	207.59	ppb	98
52) N-Heptane	3.90	43	2218545	245.71	ppb	95
53) Trichloroethene	4.20	95	1141104	206.21	ppb	97
54) methylcyclohexane	4.35	55	1815164	218.18	ppb	98
55) 1,2-Diclpropane	4.37	63	1149174	207.54	ppb	97
56) Methyl Methacrylate	4.42	69	471202	197.14	ppb	92
57) 1,4-Dioxane	4.47	88	90040	4166.01	ppb	96
58) Dibromomethane	4.46	93	497400	184.06	ppb	98
59) Bromodichloromethane	4.56	83	1325320	203.75	ppb	98
61) 2-Chloroethylvinyl Ether	4.77	63	486334	191.85	ppb	98
62) cis-1,3-Dichloropropene	4.90	75	1689293	206.28	ppb	98
64) 4-Methyl-2-Pentanone	5.02	43	647940	193.01	ppb	99
65) Toluene	5.19	91	4681522	207.56	ppb	98
66) trans-1,3-Dichloropropene	5.34	75	1313892	203.57	ppb	100
67) Ethyl Methacrylate	5.40	69	986468	209.32	ppb	99
68) 1,1,2-Trichloroethane	5.51	83	578943	196.13	ppb	99
71) Tetrachloroethene	5.64	166	1093723	218.76	ppb	98
72) 2-Hexanone	5.70	43	424326	153.77	ppb	99
73) N-Butyl Acetate	5.80	43	1201535	199.37	ppb	99
74) 1,3-Dichloropropane	5.66	76	1315384	206.88	ppb	94
75) Dibromochloromethane	5.86	129	759053	207.26	ppb	98
76) 1,2-Dibromoethane	5.97	107	632016	204.62	ppb	99
77) Chlorobenzene	6.40	112	2719468	204.87	ppb	99
78) 1,1,1,2-Tetrachloroethane	6.46	131	849895	204.48	ppb	97
79) Ethylbenzene	6.48	91	5211507	213.81	ppb	97
80) (m+p)Xylene	6.59	106	3820496	428.45	ppb	83
81) o-Xylene	6.96	106	1754853	206.40	ppb	97
82) Styrene	6.97	104	2866786	208.48	ppb	99
84) Bromoform	7.16	173	386436	213.00	ppb	100
85) Isopropylbenzene	7.30	105	4576379	219.73	ppb	98
86) Cyclohexanone	7.41	55	1198467	3769.16	ppb	98
87) 1,1,2,2-Tetrachloroethane	7.58	83	669721	198.68	ppb	98
88) Trans-1,4-Dichloro-2-buten	7.64	53	148440	213.21	ppb	97
89) 1,2,3-Trichloropropane	7.63	110	181252	208.61	ppb	98
90) n-Propylbenzene	7.70	91	5721831	221.05	ppb	98
91) Bromobenzene	7.61	156	957713	205.36	ppb	96
93) 1,3,5-Trimethylbenzene	7.86	105	3681446	213.46	ppb	100
94) 2-Chlorotoluene	7.79	91	3305929	216.45	ppb	100
95) 4-Chlorotoluene	7.90	91	3701755	218.07	ppb	99
96) tert-Butylbenzene	8.18	119	3085878	214.19	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D Vial: 14
Acq On : 17 Jul 2009 3:05 pm Operator: D.ZIMPFER
Sample : 200 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:17 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
97)	1,2,4-Trimethylbenzene	8.23	105	3580902	212.46	ppb	98
98)	sec-Butylbenzene	8.40	105	4897630	226.38	ppb	100
99)	p-Isopropyltoluene	8.54	119	3866463	224.37	ppb	99
100)	1,3-Dclbenz	8.53	146	1809684	212.78	ppb	98
101)	1,4-Dclbenz	8.61	146	1742295	205.36	ppb	99
103)	n-Butylbenzene	8.95	91	3886396	243.03	ppb	98
104)	1,2-Dclbenz	8.98	146	1566144	207.02	ppb	99
105)	1,2-Dibromo-3-chloropropan	9.77	157	107418	203.66	ppb	91
107)	1,2,4-Tcbenzene	10.58	180	968829	235.64	ppb	98
108)	Hexachlorobu	10.74	225	442055	255.58	ppb	97
109)	Naphthalen	10.83	128	1802677	205.08	ppb	100
110)	1,2,3-Tclbenzene	11.05	180	797636	223.57	ppb	99

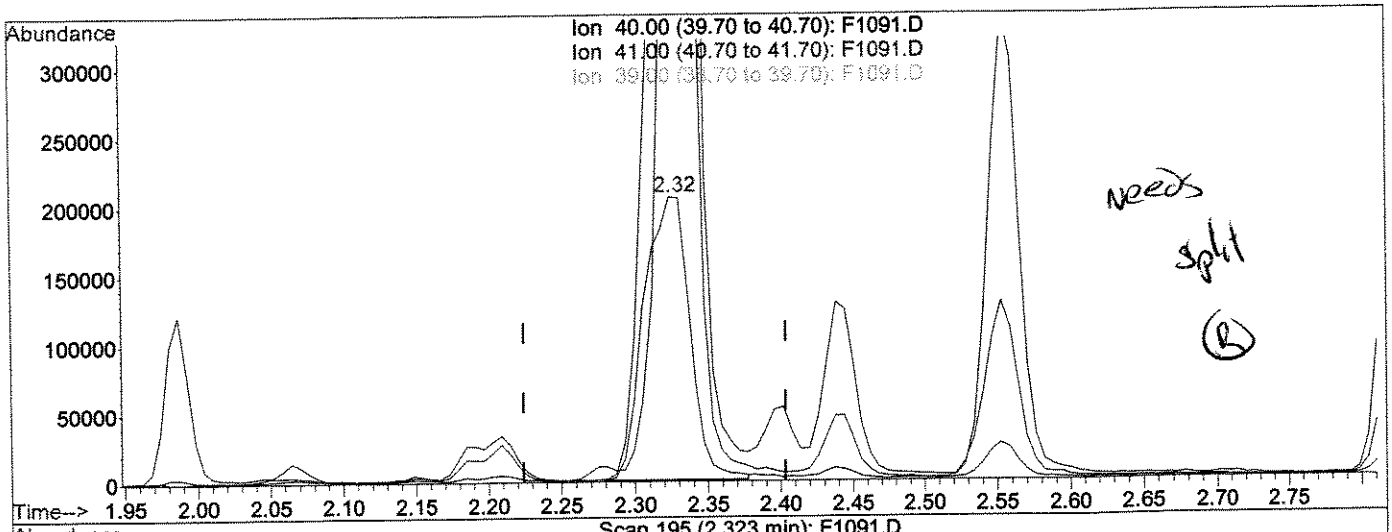
(#) = qualifier out of range (m) = manual integration
F1091.D W071709.M Fri Jul 17 15:18:18 2009

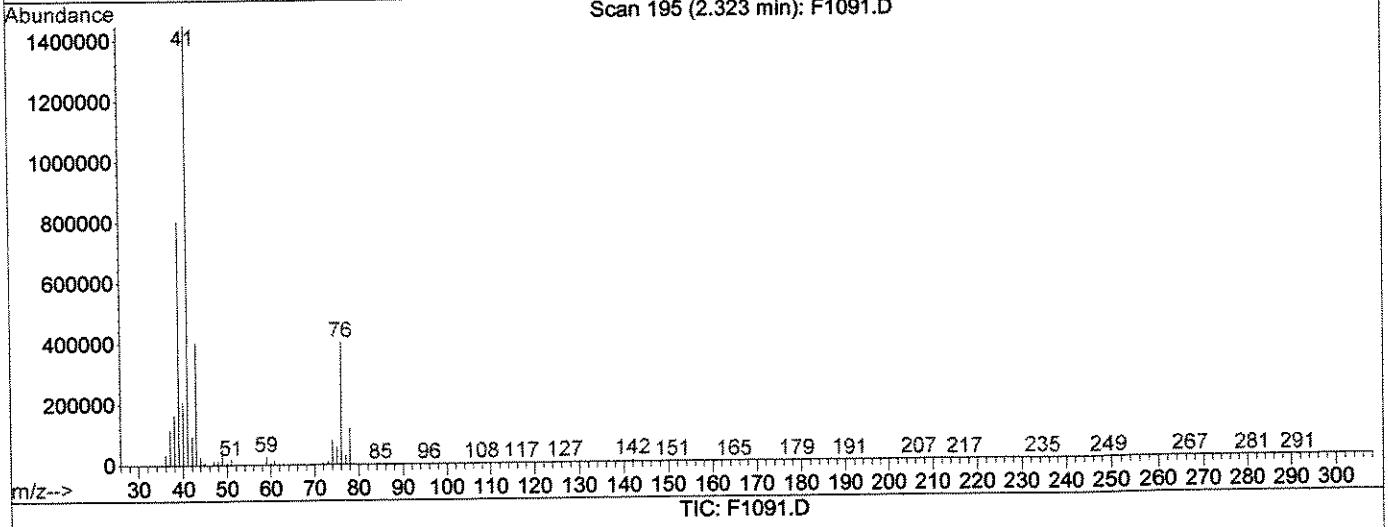
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D
Acq On : 17 Jul 2009 3:05 pm
Sample : 200 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:17 2009

Vial: 14
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:53:36 2009
Response via : Multiple Level Calibration





TIC: F1091.D

(20) Acetonitrile

2.32min 2086.94ppb

response 443860

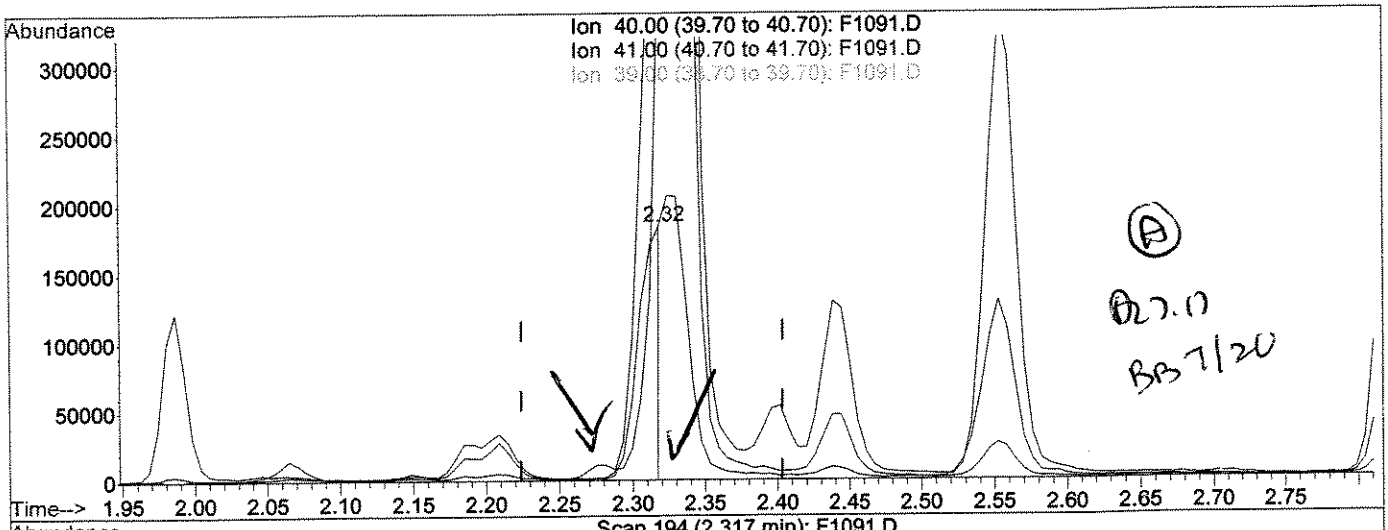
Ion	Exp%	Act%
40.00	100	100
41.00	205.80	702.70#
39.00	51.30	389.54#
0.00	0.00	0.00

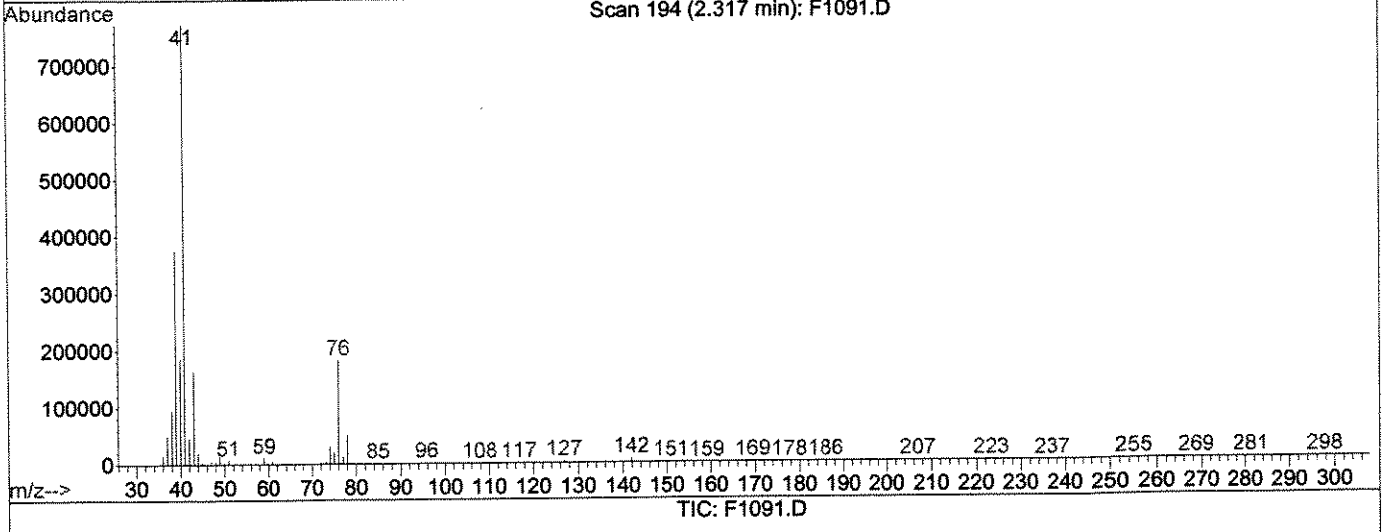
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D
Acq On : 17 Jul 2009 3:05 pm
Sample : 200 PPB STD
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:18 2009

Vial: 14
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:53:36 2009
Response via : Multiple Level Calibration





TIC: F1091.D

(20) Acetonitrile

2.32min 950.54ppb m

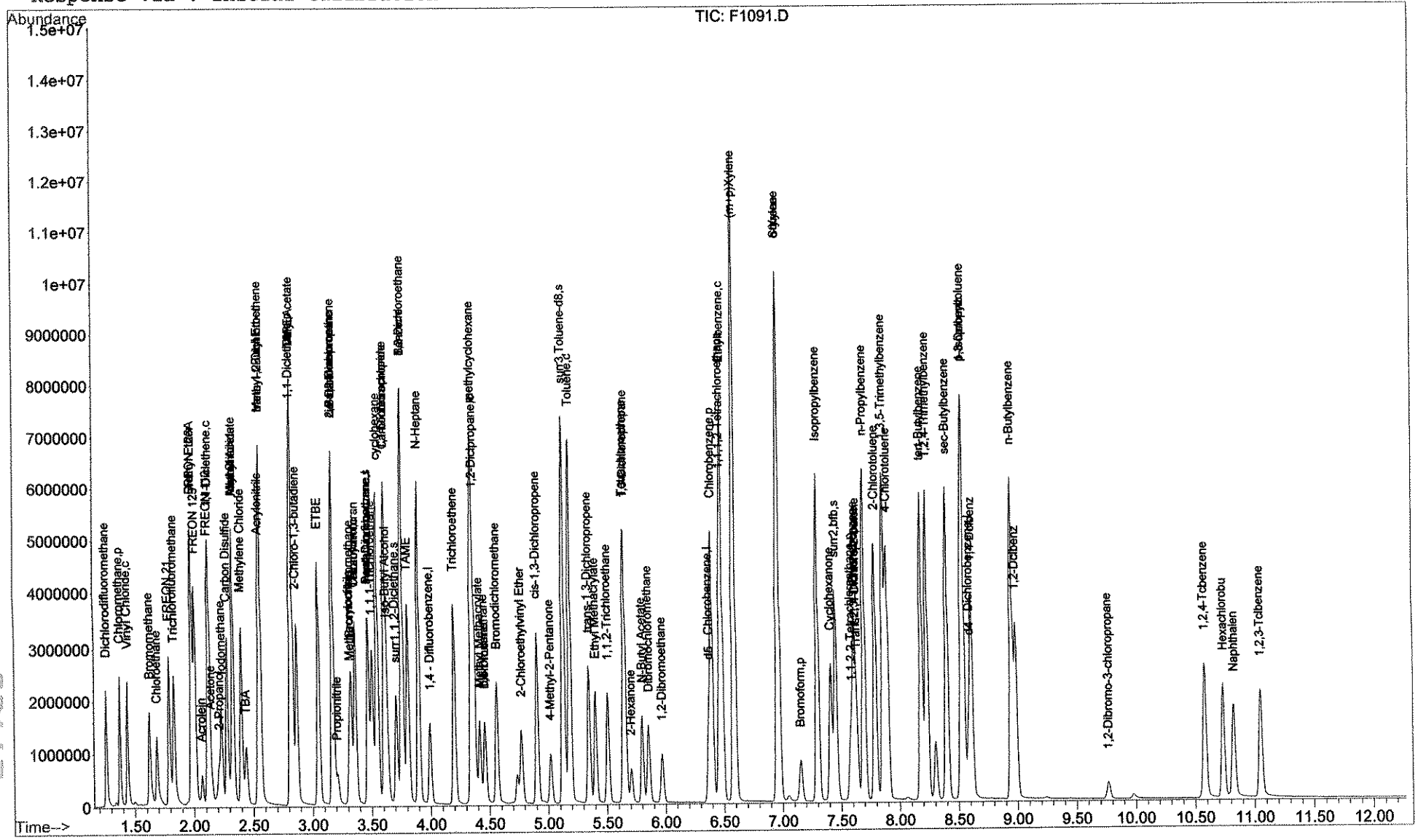
response 202164

Ion	Exp%	Act%
40.00	100	100
41.00	205.80	419.91#
39.00	51.30	203.90#
0.00	0.00	0.00

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1091.D Vial: 14
Acq On : 17 Jul 2009 3:05 pm Operator: D.ZIMPFER
Sample : 200 PPB STD Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 17 15:17 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Fri Jul 17 14:20:48 2009
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Multiple Level Calibration

D29/10

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	111	-0.02
2		Dichlorodifluoromethane	0.479	0.497	-3.8	120	0.00
3		Freon 114	0.000	0.000	0.0	118	0.00
4	p	Chloromethane	0.587	0.664	-13.1	139	0.00
5	c	Vinyl Chloride	0.571	0.637	-11.6	129	0.00
6		Bromomethane	0.316	0.354	-12.0	126	0.00
7		Chloroethane	0.400	0.442	-10.5	135	0.00
8		FREON 21	0.894	0.966	-8.1	138	-0.01
9		Trichlorofluoromethane	0.548	0.668	-21.9#	142	-0.01
10		Diethyl Ether	0.319	0.253	20.7#	92	-0.01
11		FREON 123A	0.240	0.249	-3.8	136	-0.01
12		FREON 123	0.430	0.496	-15.3	140	-0.01
13		Acrolein	0.027	0.024	11.1	109	-0.01
14		FREON 113	0.170	0.191	-12.4	130	-0.01
15	c	1,1-Diclethene	0.408	0.431	-5.6	127	-0.01
16		Acetone	0.066	0.053	19.7	94	-0.02
17		2-Propanol	0.013	0.010	23.1#	97	-0.02
18		Iodomethane	0.222	0.289	-30.2#	131	-0.01
19		Carbon Disulfide	1.345	1.371	-1.9	123	-0.01
20		Acetonitrile	0.017	0.016	5.9	129	-0.01
21		Allyl Chloride	0.270	0.275	-1.9	111	-0.02
22		Methyl Acetate	0.331	0.225 17.7	~~32.0#~~	~~91~~	-0.01
23		Methylene Chloride	0.471	0.485	-3.0	116	-0.01
24		TBA	0.017	0.014	17.6	95	-0.01
25		Acrylonitrile	0.098	0.079	19.4	94	-0.02
26		Methyl-t-Butyl Ether	0.916	0.772	15.7	95	-0.02
27		trans-1,2-Dichloroethene	0.472	0.494	-4.7	124	-0.02
28	p	1,1-Diclethane	0.871	0.936	-7.5	125	-0.02
29		DIPE	1.844	1.671	9.4	110	-0.02
30		Vinyl Acetate	0.047	0.035	25.5#	85	-0.02
31		2-Chloro-1,3-butadiene	0.646	0.671	-3.9	122	-0.02
32		ETBE	1.310	1.127	14.0	104	-0.02
33		2,2-Dichloropropane	0.690	0.757	-9.7	128	-0.02
34		2-Butanone	0.171	0.095 21.7	~~44.4#~~	~~91~~	-0.02
35		cis-1,2-Dichloroethene	0.521	0.528	-1.3	121	-0.02
36		Propionitrile	0.032	0.026	18.8	102	-0.02
37		Methacrylonitrile	0.109	0.086	21.1#	95	-0.02
38		Bromochloromethane	0.198	0.195	1.5	115	-0.02
39	c	Chloroform	0.802	0.830	-3.5	121	-0.02
40		Tetrahydrofuran	0.081	0.058	28.4#	86	-0.02
41		1,1,1-Trichloroethane	0.638	0.685	-7.4	130	-0.02
42	I	1,4 - Difluorobenzene	1.000	1.000	0.0	111	-0.02
43	s	surr4,Dibrflmethane	0.293	0.284	3.1	104	-0.02
44		cyclohexane	0.548	0.602	-9.9	137	-0.02
45		Carbontetrachloride	0.300	0.339	-13.0	134	-0.02
46		1,1-Dichloropropene	0.405	0.452	-11.6	132	-0.02
47		Iso-Butyl Alcohol	0.008	0.005 22.0	~~37.5#~~	~~94~~	-0.02
48	s	surr1,1,2-Diclethane	0.271	0.228	15.9	89	-0.02
49		Benzene	1.187	1.308	-10.2	126	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	
50		1,2-Dichloroethane	0.280	0.256	8.6	103	-0.02	
51		TAME	0.633	0.540	14.7	98	-0.02	
52		N-Heptane	0.511	0.546	~~-6.8~~ 10.8	~~124~~	-0.02	
53		Trichloroethene	0.281	0.310	-10.3	129	-0.02	
54		methylcyclohexane	0.442	0.477	-7.9	134	-0.02	
55	c	1,2-Diclpropane	0.296	0.298	-0.7	118	-0.02	
56		Methyl Methacrylate	0.127	0.098	22.8#	95	-0.02	
57		1,4-Dioxane	0.001	0.001	0.0	122	-0.02	
58		Dibromomethane	0.139	0.118	15.1	103	-0.02	
59		Bromodichloromethane	0.340	0.337	0.9	115	-0.02	
60		2-Nitropropane	0.000	0.000	0.0	89	-0.02	
61		2-Chloroethylvinyl Ether	0.134	0.094	29.9#	85	-0.02	
62		cis-1,3-Dichloropropene	0.432	0.403	6.7	108	-0.02	
63	I	d5 - Chlorobenzene	1.000	1.000	0.0	108	-0.04	
64		4-Methyl-2-Pentanone	0.218	0.145	36.0 ~~33.5#~~	~~83~~	-0.02	(x) #1
65	c	Toluene	1.401	1.549	-10.6	126	-0.02	
66		trans-1,3-Dichloropropene	0.411	0.362	11.9	100	-0.02	
67		Ethyl Methacrylate	0.300	0.248	17.3	93	-0.03	
68		1,1,2-Trichloroethane	0.184	0.166	9.8	105	-0.02	
69	s	surr3,Toluene-d8	1.317	1.330	-1.0	106	-0.02	
70	s	surr2,bfb	0.489	0.465	4.9	100	-0.03	
71		Tetrachloroethene	0.305	0.373	-22.3#	139	-0.03	
72		2-Hexanone	0.144	0.099	25.9 ~~31.2#~~	~~79~~	-0.03	(x) #2
73		N-Butyl Acetate	0.394	0.268	32.0#	84	-0.03	
74		1,3-Dichloropropane	0.394	0.366	7.1	104	-0.03	
75		Dibromochloromethane	0.225	0.226	-0.4	113	-0.03	
76		1,2-Dibromoethane	0.188	0.175	6.9	101	-0.03	
77	p	Chlorobenzene	0.808	0.879	-8.8	124	-0.03	
78		1,1,1,2-Tetrachloroethane	0.256	0.277	-8.2	121	-0.03	
79	c	Ethylbenzene	1.522	1.724	-13.3	128	-0.03	
80		(m+p)Xylene	0.546	0.631	-15.6	128	-0.03	
81		o-Xylene	0.515	0.580	-12.6	124	-0.03	
82		Styrene	0.839	0.904	-7.7	118	-0.03	
83	I	d4 - Dichlorobenzene	1.000	1.000	0.0	108	-0.03	
84	p	Bromoform	0.267	0.246	7.9	101	-0.03	
85		Isopropylbenzene	3.024	3.557	-17.6	129	-0.04	
86		Cyclohexanone	0.045	0.033	26.7#	92	-0.03	5
87	p	1,1,2,2-Tetrachloroethane	0.498	0.454	8.8	104	-0.03	
88		Trans-1,4-Dichloro-2-butene	0.108	0.107	0.9	112	-0.04	
89		1,2,3-Trichloropropane	0.139	0.116	16.5	100	-0.03	
90		n-Propylbenzene	3.809	4.497	-18.1	129	-0.03	
91		Bromobenzene	0.676	0.718	-6.2	120	-0.03	
92		4-Ethyltoluene	0.000	0.000	0.0	127	-0.03	
93		1,3,5-Trimethylbenzene	2.505	2.855	-14.0	127	-0.03	
94		2-Chlorotoluene	2.251	2.484	-10.4	123	-0.03	
95		4-Chlorotoluene	2.512	2.814	-12.0	124	-0.03	
96		tert-Butylbenzene	2.065	2.463	-19.3	130	-0.04	
97		1,2,4-Trimethylbenzene	2.447	2.742	-12.1	123	-0.03	

(#) = Out of Range

00119

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
98	sec-Butylbenzene	3.123	3.867	-23.8#	133	-0.04
99	p-Isopropyltoluene	2.482	3.012	-21.4#	130	-0.04
100	1,3-Dclbenz	1.228	1.415	-15.2	125	-0.04
101	1,4-Dclbenz	1.221	1.330	-8.9	121	-0.04
102	Benzyl Chloride	0.000	0.000	0.0	127	-0.04
103	n-Butylbenzene	2.367	2.852	-20.5#	128	-0.04
104	1,2-Dclbenz	1.091	1.165	-6.8	117	-0.04
105	1,2-Dibromo-3-chloropropane	0.076	0.067	11.8	96	-0.04
106	Nitrobenzene	0.000	0.000	0.0	103	-0.04
107	1,2,4-Tcbenzene	0.595	0.640	-7.6	113	-0.04
108	Hexachlorobu	0.251	0.332	-32.3#	142	-0.04
109	Naphthalen	1.240	1.061	14.4	96	-0.04
110	1,2,3-Tclbenzene	0.509	0.513	-0.8	110	-0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

00120

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:34 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

9/29/10

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	3.45	168	666460	50.00	ppb		-0.02
42) 1,4 - Difluorobenzene	3.97	114	1075917	50.00	ppb		-0.02
63) d5 - Chlorobenzene	6.34	117	891152	50.00	ppb		-0.04
83) d4 - Dichlorobenzene	8.55	152	384958	50.00	ppb		-0.03
System Monitoring Compounds							
43) surr4,Dibrflmethane	3.45	113	305971	48.52	ppb		-0.02
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.04%				
48) surr1,1,2-Diclethane	3.69	65	245435	42.06	ppb		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 84.12%				
69) surr3,Toluene-d8	5.10	98	1185014	50.48	ppb		-0.02
Spiked Amount 50.000	Range 87 - 121		Recovery = 100.96%				
70) surr2,bfb	7.42	95	414721	47.54	ppb		-0.03
Spiked Amount 50.000	Range 85 - 122		Recovery = 95.08%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.25	85	331475	51.89	ppb		99
4) Chloromethane	1.37	50	442389	56.52	ppb		100
5) Vinyl Chloride	1.43	62	424519	55.76	ppb		99
6) Bromomethane	1.63	96	235846	56.04	ppb		99
7) Chloroethane	1.68	64	294847	55.31	ppb		98
8) FREON 21	1.78	67	644069	54.06	ppb		100
9) Trichlorofluoromethane	1.82	101	444907	60.94	ppb		99
10) Diethyl Ether	1.97	59	168605	39.67	ppb		99
11) FREON 123A	1.97	85	165826	51.90	ppb		97
12) FREON 123	2.00	85	330471	57.70	ppb		99
13) Acrolein	2.06	56	80266	221.38	ppb		100
14) FREON 113	2.11	85	127521	56.19	ppb		97
15) 1,1-Diclethene	2.12	96	286926	52.75	ppb		99
16) Acetone	2.14	43	35012	39.98	ppb		95
17) 2-Propanol	2.19	45	138873	824.52	ppb		99
18) Iodomethane	2.22	127	192766	65.15	ppb		100
19) Carbon Disulfide	2.27	76	913508	50.96	ppb		100
20) Acetonitrile	2.32	40	107855	483.58	ppb	#	1
21) Allyl Chloride	2.32	76	183109	50.88	ppb		98
22) Methyl Acetate	2.32	43	149907	41.14	ppb		98
23) Methylene Chloride	2.39	84	323006	51.47	ppb		94
24) TBA	2.42	59	188110	807.24	ppb		98
25) Acrylonitrile	2.52	53	263935	202.04	ppb		98
26) Methyl-t-Butyl Ether	2.54	73	514830	42.18	ppb		98
27) trans-1,2-Dichloroethene	2.55	96	329354	52.39	ppb		97
28) 1,1-Diclethane	2.80	63	624002	53.78	ppb		100
29) DIPE	2.81	45	1113926	45.33	ppb		96
30) Vinyl Acetate	2.80	86	23230	36.80	ppb		73
31) 2-Chloro-1,3-butadiene	2.85	53	447014	51.95	ppb		97
32) ETBE	3.03	59	750905	43.00	ppb		100
33) 2,2-Dichloropropane	3.16	77	504605	54.90	ppb		97
34) 2-Butanone	3.15	43	63004	39.12	ppb	#	90
35) cis-1,2-Dichloroethene	3.15	96	352044	50.65	ppb		96
36) Propionitrile	3.19	54	88239	210.04	ppb		99
37) Methacrylonitrile	3.29	67	57019	39.14	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:34 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	Bromochloromethane	3.31	128	129923	49.26 ppb	88
39)	Chloroform	3.34	83	553140	51.73 ppb	100
40)	Tetrahydrofuran	3.35	42	38830	35.96 ppb	94
41)	1,1,1-Trichloroethane	3.48	97	456614	53.72 ppb	97
44)	cyclohexane	3.53	56	647673	54.94 ppb	98
45)	Carbontetrachloride	3.60	117	364511	56.47 ppb	98
46)	1,1-Dichloropropene	3.59	75	485908	55.74 ppb	99
47)	Iso-Butyl Alcohol	3.61	43	103625	780.07 ppb	99
49)	Benzene	3.74	78	1407040	55.09 ppb	99
50)	1,2-Dichloroethane	3.74	62	275155	45.74 ppb	100
51)	TAME	3.78	73	581033	42.67 ppb	98
52)	N-Heptane	3.87	43	587385	50.89 ppb	96
53)	Trichloroethene	4.18	95	333492	55.13 ppb	91
54)	methylcyclohexane	4.33	55	513120	53.93 ppb	97
55)	1,2-Diclpropane	4.34	63	321103	50.35 ppb	93
56)	Methyl Methacrylate	4.39	69	105434	38.73 ppb	89
57)	1,4-Dioxane	4.44	88	22087	980.05 ppb	97
58)	Dibromomethane	4.43	93	126823	42.33 ppb	98
59)	Bromodichloromethane	4.54	83	362636	49.51 ppb	97
61)	2-Chloroethylvinyl Ether	4.75	63	100870	35.09 ppb	100
62)	cis-1,3-Dichloropropene	4.88	75	433564	46.69 ppb	97
64)	4-Methyl-2-Pentanone	4.99	43	129450	37.01 ppb	99
65)	Toluene	5.16	91	1380123	55.26 ppb	98
66)	trans-1,3-Dichloropropene	5.32	75	322988	44.13 ppb	99
67)	Ethyl Methacrylate	5.37	69	221103	41.35 ppb	98
68)	1,1,2-Trichloroethane	5.48	83	148312	45.29 ppb	98
71)	Tetrachloroethene	5.61	166	332615	61.23 ppb	100
72)	2-Hexanone	5.67	43	88154	37.23 ppb	99
73)	N-Butyl Acetate	5.77	43	238384	33.94 ppb	99
74)	1,3-Dichloropropane	5.63	76	325814	46.35 ppb	95
75)	Dibromochloromethane	5.82	129	201093	50.18 ppb	98
76)	1,2-Dibromoethane	5.94	107	156224	46.58 ppb	100
77)	Chlorobenzene	6.37	112	783694	54.44 ppb	98
78)	1,1,1,2-Tetrachloroethane	6.43	131	246934	54.18 ppb	98
79)	Ethylbenzene	6.45	91	1536610	56.66 ppb	98
80)	(m+p)Xylene	6.55	106	1125007	115.70 ppb	96
81)	o-Xylene	6.93	106	517233	56.35 ppb	99
82)	Styrene	6.94	104	805683	53.88 ppb	97
84)	Bromoform	7.12	173	94679	46.02 ppb	98
85)	Isopropylbenzene	7.26	105	1369218	58.81 ppb	97
86)	Cyclohexanone	7.38	55	255505	744.06 ppb	99
87)	1,1,2,2-Tetrachloroethane	7.55	83	174640	45.54 ppb	94
88)	Trans-1,4-Dichloro-2-buten	7.60	53	41305	49.85 ppb	100
89)	1,2,3-Trichloropropane	7.60	110	44722	41.81 ppb	95
90)	n-Propylbenzene	7.66	91	1731204	59.03 ppb	98
91)	Bromobenzene	7.58	156	276567	53.13 ppb	95
93)	1,3,5-Trimethylbenzene	7.83	105	1099146	56.99 ppb	98
94)	2-Chlorotoluene	7.76	91	956377	55.18 ppb	98
95)	4-Chlorotoluene	7.86	91	1083375	56.03 ppb	98
96)	tert-Butylbenzene	8.15	119	948184	59.63 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:34 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

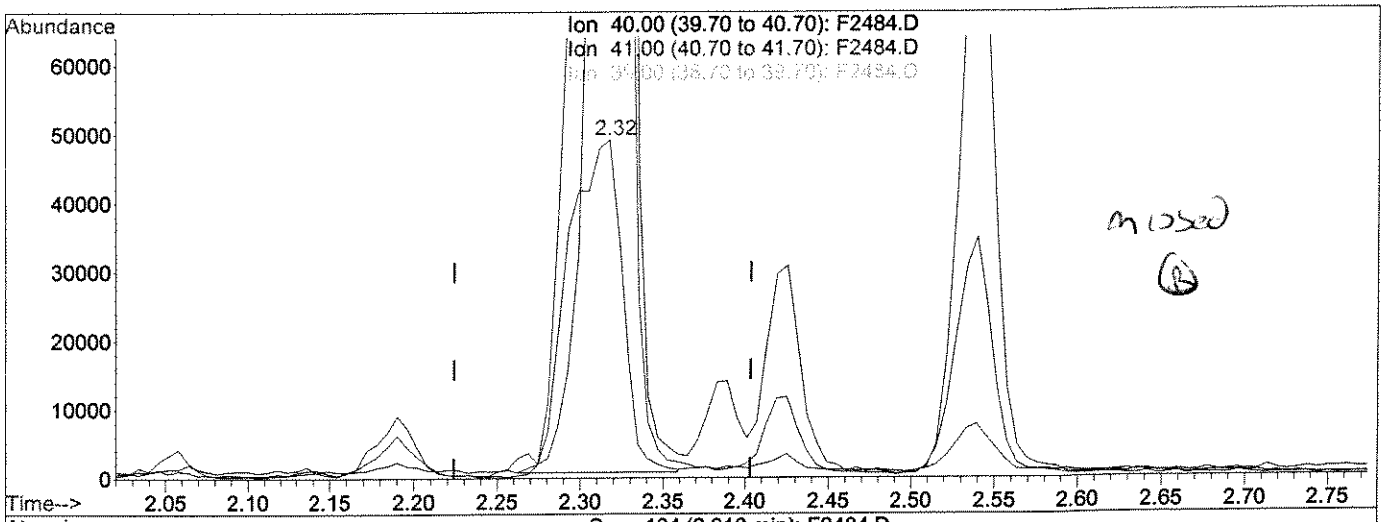
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
97)	1,2,4-Trimethylbenzene	8.20	105	1055376	56.02 ppb	98
98)	sec-Butylbenzene	8.36	105	1488690	61.92 ppb	99
99)	p-Isopropyltoluene	8.50	119	1159676	60.69 ppb	98
100)	1,3-Dclbenz	8.48	146	544782	57.61 ppb	98
101)	1,4-Dclbenz	8.57	146	511855	54.45 ppb	98
103)	n-Butylbenzene	8.91	91	1097806	60.24 ppb	99
104)	1,2-Dclbenz	8.95	146	448556	53.41 ppb	97
105)	1,2-Dibromo-3-chloropropan	9.73	157	25823	44.24 ppb	89
107)	1,2,4-Tcbenzene	10.54	180	246236	53.72 ppb	98
108)	Hexachlorobu	10.69	225	127724	56.65 ppb	97
109)	Naphthalen	10.78	128	408324	42.78 ppb	99
110)	1,2,3-Tclbenzene	11.00	180	197509	50.43 ppb	98

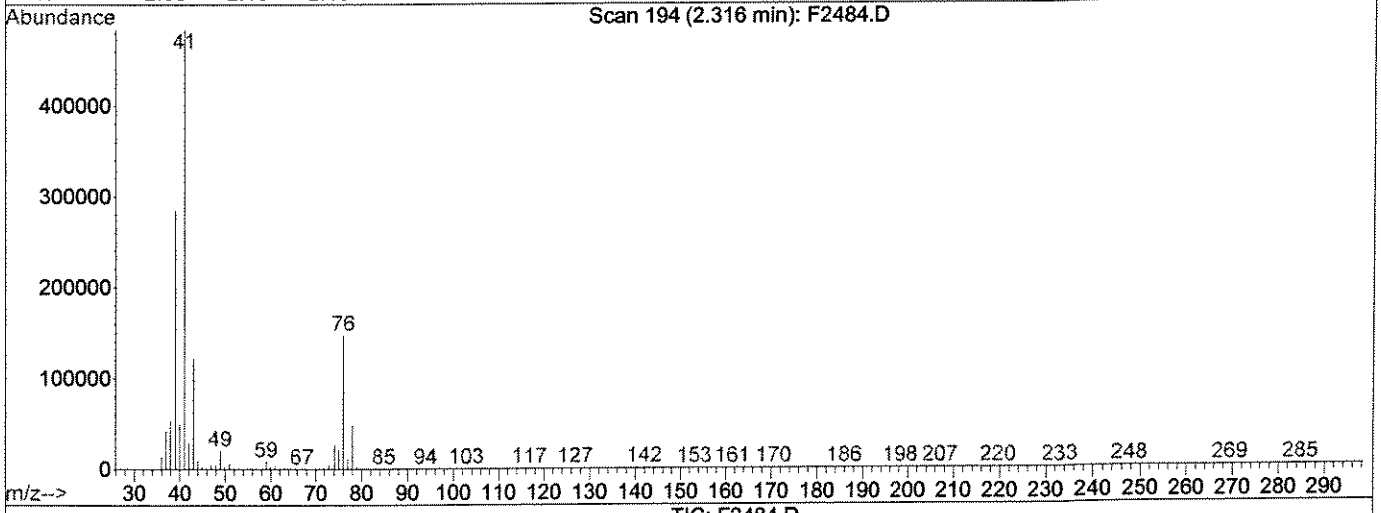
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:34 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Multiple Level Calibration





TIC: F2484.D

(20) Acetonitrile

2.32min 483.58ppb

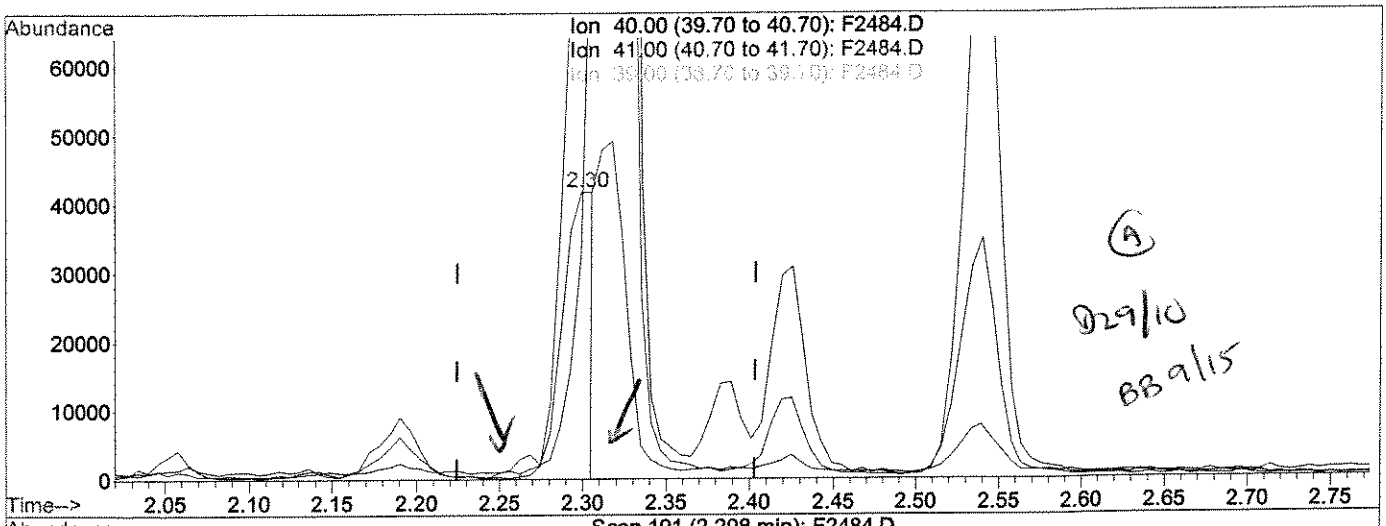
response 107855

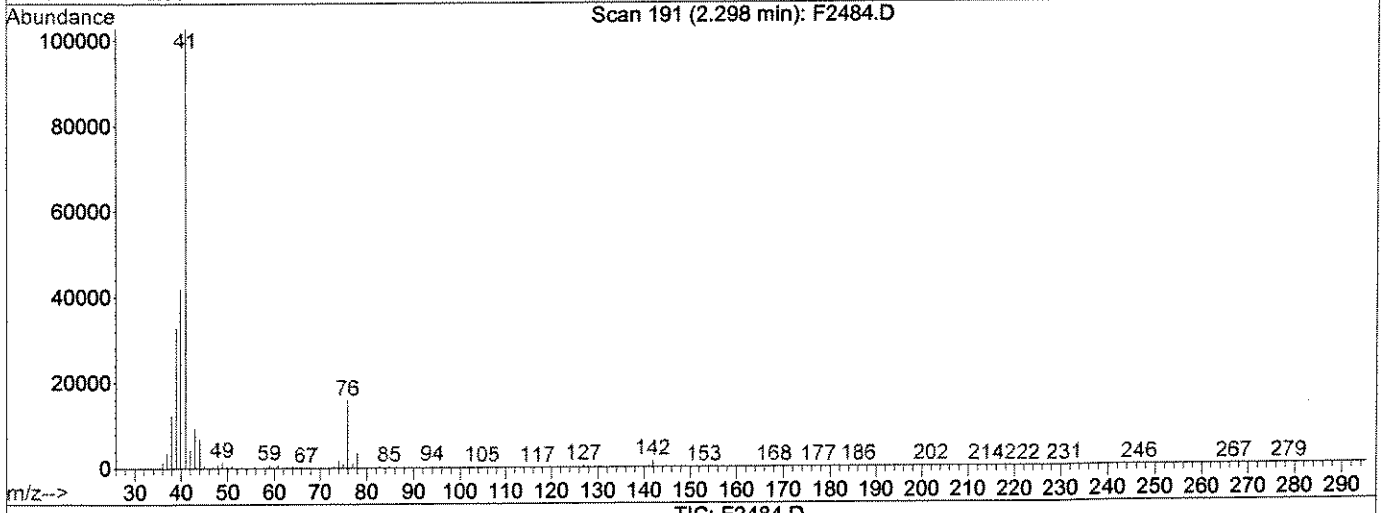
Ion	Exp%	Act%
40.00	100	100
41.00	205.80	986.00#
39.00	51.30	579.09#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:35 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Multiple Level Calibration





TIC: F2484.D

(20) Acetonitrile

2.30min 243.77ppb m

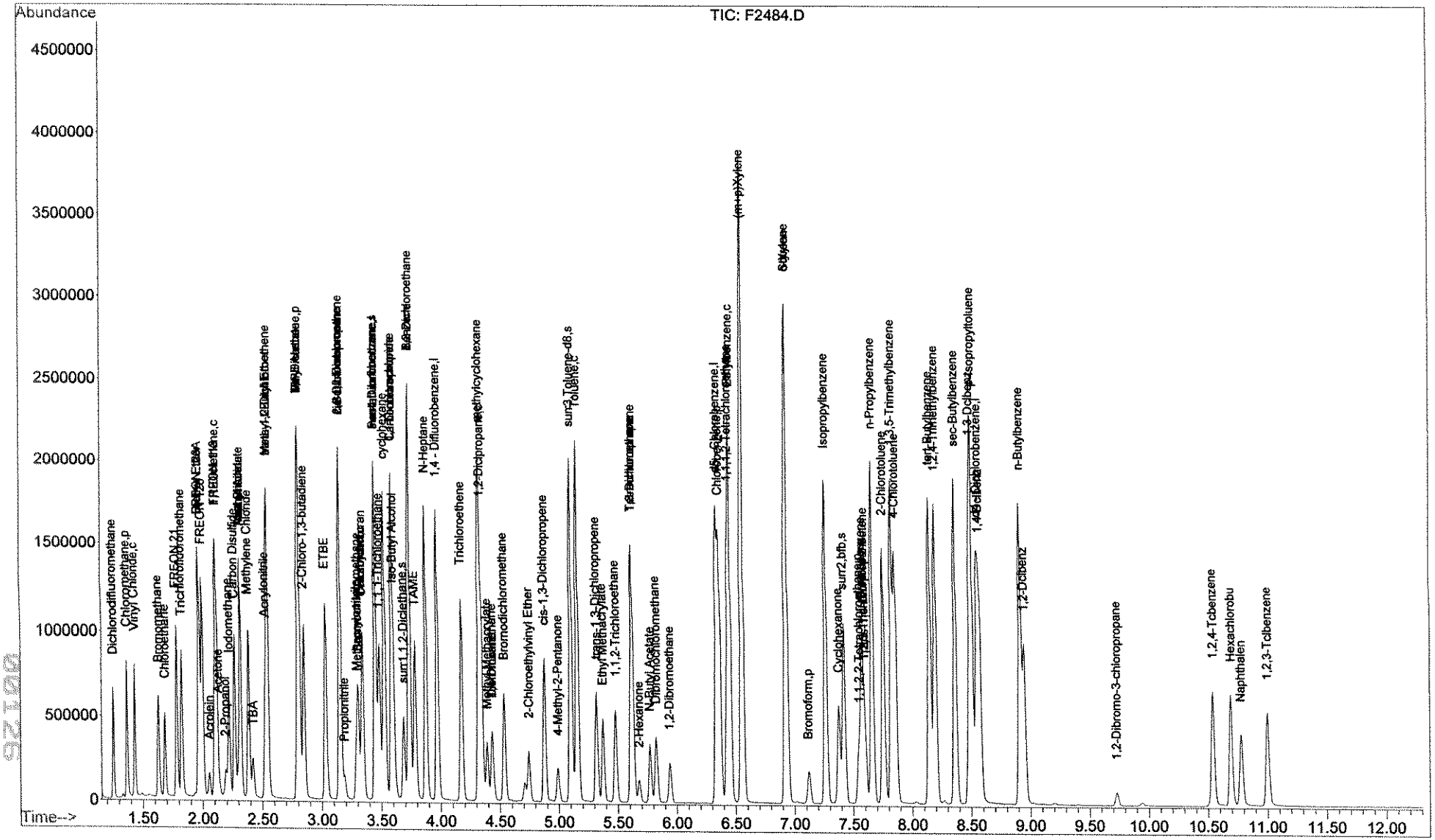
response 54368

Ion	Exp%	Act%
40.00	100	100
41.00	205.80	246.27
39.00	51.30	78.41#
0.00	0.00	0.00

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2484.D Vial: 5
Acq On : 10 Sep 2009 10:21 am Operator: D.ZIMPFER
Sample : CCV Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:34 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration



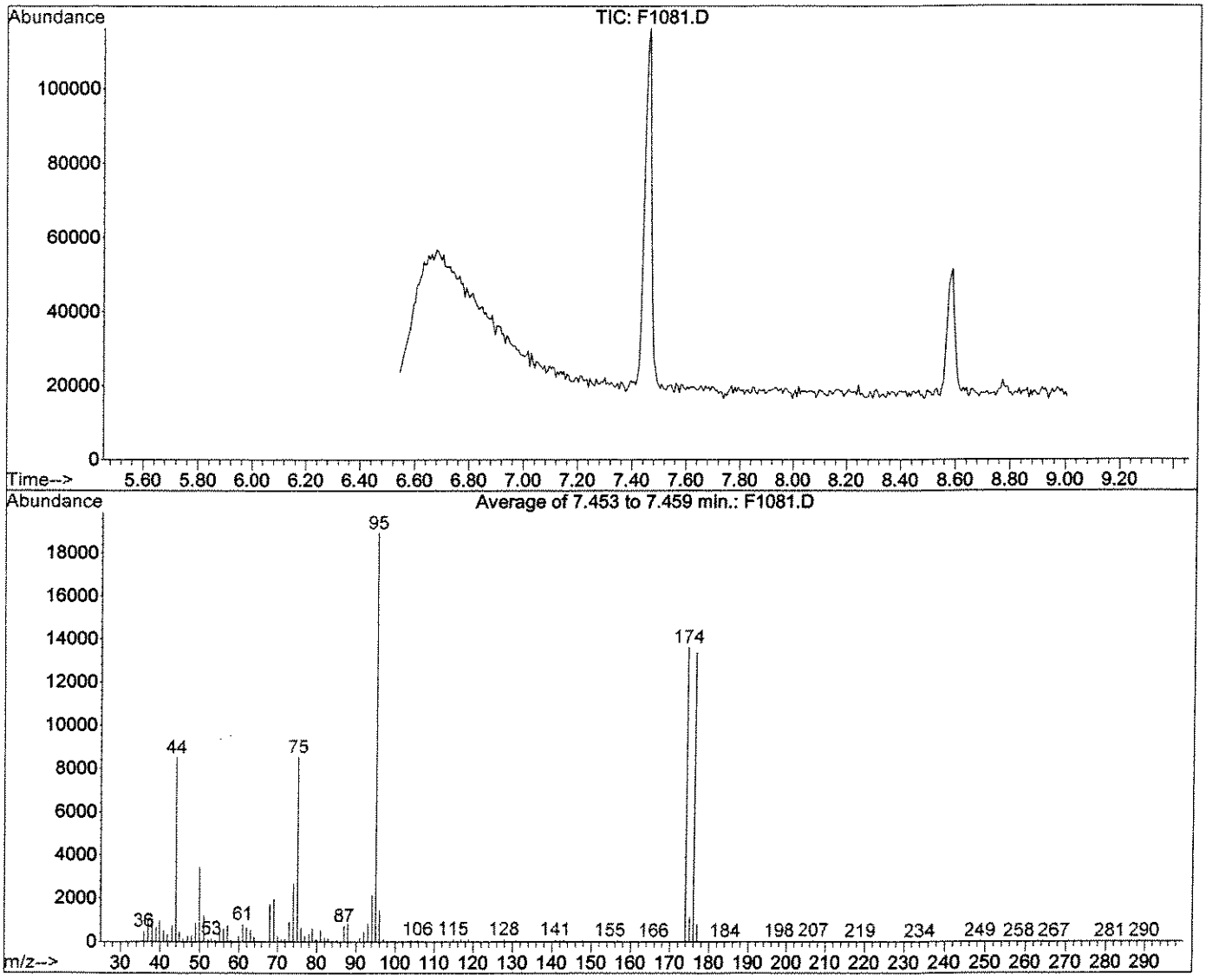
VOLATILE ORGANICS

RAW QC DATA

BFB

Data File : J:\ACQUDATA\MSVOA8\DATA\071709\F1081.D Vial: 2
Acq On : 17 Jul 2009 9:41 am Operator: D.ZIMPFER
Sample : TUNE Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\MSVOA8\METHODS\W062509.M (RTE Integrator)
Title : 8260voa

D17.0



Spectrum Information: Average of 7.453 to 7.459 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	3430	PASS
75	95	30	60	45.0	8536	PASS
95	95	100	100	100.0	18950	PASS
96	95	5	9	7.7	1457	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	71.8	13610	PASS
175	174	5	9	8.1	1109	PASS
176	174	95	101	98.2	13364	PASS
177	176	5	9	6.0	801	PASS

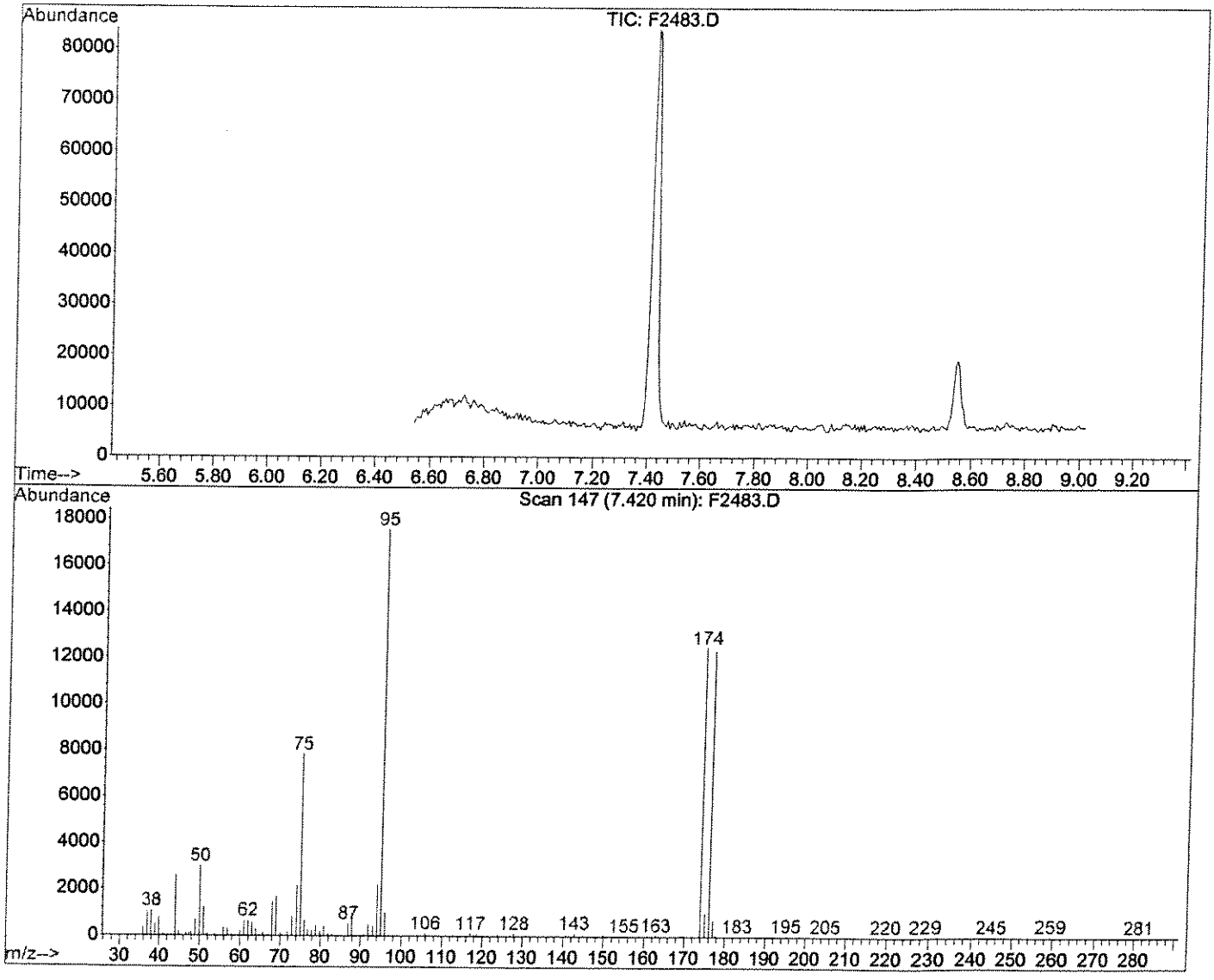
F1081.D W062509.M Fri Jul 17 09:51:25 2009

BFB

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2483.D
Acq On : 10 Sep 2009 9:53 am
Sample : TUNE
Misc :
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa

Vial: 4
Operator: D.ZIMPFER
Inst : MS #8
Multiplr: 1.00

D29/10



Spectrum Information: Scan 147

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	2994	PASS
75	95	30	60	44.6	7833	PASS
95	95	100	100	100.0	17576	PASS
96	95	5	9	5.6	984	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	70.9	12464	PASS
175	174	5	9	8.0	1000	PASS
176	174	95	101	99.0	12342	PASS
177	176	5	9	5.6	696	PASS

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/27/09

Sample Name: Method Blank
Lab Code: RQ0907884-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.23	U	1.0	0.23	1	NA	9/10/09 12:21		169786	
Isopropylbenzene (Cumene)	0.36	U	2.0	0.36	1	NA	9/10/09 12:21		169786	
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	1	NA	9/10/09 12:21		169786	
1,1,2-Trichloroethane	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	
1,1-Dichloroethane (1,1-DCA)	0.64	U	1.0	0.64	1	NA	9/10/09 12:21		169786	
1,1-Dichloroethene (1,1-DCE)	0.59	U	1.0	0.59	1	NA	9/10/09 12:21		169786	
1,1-Dichloropropene	0.39	U	2.0	0.39	1	NA	9/10/09 12:21		169786	
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	1	NA	9/10/09 12:21		169786	
1,2,3-Trichloropropane	0.64	U	2.0	0.64	1	NA	9/10/09 12:21		169786	
1,2,4-Trichlorobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:21		169786	
1,2,4-Trimethylbenzene	0.53	U	2.0	0.53	1	NA	9/10/09 12:21		169786	
1,2-Dibromo-3-chloropropane (DBCP)	0.61	U	5.0	0.61	1	NA	9/10/09 12:21		169786	
1,2-Dibromoethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:21		169786	
1,2-Dichloroethane	0.42	U	1.0	0.42	1	NA	9/10/09 12:21		169786	
1,2-Dichloropropane	0.36	U	1.0	0.36	1	NA	9/10/09 12:21		169786	
1,3,5-Trimethylbenzene	0.37	U	2.0	0.37	1	NA	9/10/09 12:21		169786	
1,3-Dichlorobenzene	0.84	U	2.0	0.84	1	NA	9/10/09 12:21		169786	
1,3-Dichloropropane	0.51	U	2.0	0.51	1	NA	9/10/09 12:21		169786	
1,4-Dichlorobenzene	0.44	U	2.0	0.44	1	NA	9/10/09 12:21		169786	
2,2-Dichloropropane	0.42	U	2.0	0.42	1	NA	9/10/09 12:21		169786	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	9/10/09 12:21		169786	
2-Chlorotoluene	0.48	U	5.0	0.48	1	NA	9/10/09 12:21		169786	
2-Hexanone	0.78	U	10	0.78	1	NA	9/10/09 12:21		169786	
2-Methyl-2-propanol	11	U	100	11	1	NA	9/10/09 12:21		169786	
4-Chlorotoluene	0.52	U	5.0	0.52	1	NA	9/10/09 12:21		169786	
4-Isopropyltoluene	0.42	U	2.0	0.42	1	NA	9/10/09 12:21		169786	
4-Methyl-2-pentanone	0.71	U	10	0.71	1	NA	9/10/09 12:21		169786	
Acetone	1.6	U	20	1.6	1	NA	9/10/09 12:21		169786	
Benzene	0.42	U	1.0	0.42	1	NA	9/10/09 12:21		169786	
Bromobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:21		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/27/09

Sample Name: Method Blank
Lab Code: RQ0907884-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromochloromethane	0.54	U	2.0	0.54	1	NA	9/10/09 12:21		169786	
Bromodichloromethane	0.84	U	1.0	0.84	1	NA	9/10/09 12:21		169786	
Bromoform	0.32	U	1.0	0.32	1	NA	9/10/09 12:21		169786	
Bromomethane	0.58	U	2.0	0.58	1	NA	9/10/09 12:21		169786	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	9/10/09 12:21		169786	
Chlorobenzene	0.44	U	1.0	0.44	1	NA	9/10/09 12:21		169786	
Chloroethane	0.36	U	2.0	0.36	1	NA	9/10/09 12:21		169786	
Chloroform	0.18	U	1.0	0.18	1	NA	9/10/09 12:21		169786	
Chloromethane	0.96	U	2.0	0.96	1	NA	9/10/09 12:21		169786	
Dibromochloromethane	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
Dibromomethane	0.54	U	1.0	0.54	1	NA	9/10/09 12:21		169786	
Dichlorodifluoromethane (CFC 12)	0.53	U	1.0	0.53	1	NA	9/10/09 12:21		169786	
Dichloromethane	0.50	U	2.0	0.50	1	NA	9/10/09 12:21		169786	
Diisopropyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:21		169786	
Ethyl tert-Butyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 12:21		169786	
Ethylbenzene	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
Hexachlorobutadiene	0.93	U	5.0	0.93	1	NA	9/10/09 12:21		169786	
Methyl tert-Butyl Ether	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	
Naphthalene	0.37	U	2.0	0.37	1	NA	9/10/09 12:21		169786	
Styrene	0.37	U	1.0	0.37	1	NA	9/10/09 12:21		169786	
Tetrachloroethene (PCE)	0.43	U	1.0	0.43	1	NA	9/10/09 12:21		169786	
Toluene	0.42	U	1.0	0.42	1	NA	9/10/09 12:21		169786	
Trichloroethene (TCE)	0.63	U	1.0	0.63	1	NA	9/10/09 12:21		169786	
Trichlorofluoromethane (CFC 11)	0.48	U	1.0	0.48	1	NA	9/10/09 12:21		169786	
Vinyl Chloride	0.52	U	1.0	0.52	1	NA	9/10/09 12:21		169786	
cis-1,2-Dichloroethene	0.48	U	1.0	0.48	1	NA	9/10/09 12:21		169786	
cis-1,3-Dichloropropene	0.38	U	1.0	0.38	1	NA	9/10/09 12:21		169786	
m,p-Xylenes	0.85	U	1.0	0.85	1	NA	9/10/09 12:21		169786	
n-Butylbenzene	0.40	U	2.0	0.40	1	NA	9/10/09 12:21		169786	
n-Propylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:21		169786	
o-Xylene	0.56	U	1.0	0.56	1	NA	9/10/09 12:21		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/27/09

Sample Name: Method Blank
Lab Code: RQ0907884-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Volatile Organics

Analytical Method: 8260B
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
sec-Butylbenzene	0.46	U	2.0	0.46	1	NA	9/10/09 12:21		169786	
tert-Amyl Methyl Ether	0.21	U	1.0	0.21	1	NA	9/10/09 12:21		169786	
tert-Butylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 12:21		169786	
trans-1,2-Dichloroethene	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	
trans-1,3-Dichloropropene	0.25	U	1.0	0.25	1	NA	9/10/09 12:21		169786	
1,1,1-Trichloroethane (TCA)	0.45	U	1.0	0.45	1	NA	9/10/09 12:21		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	96	70-130	9/10/09 12:21		
Dibromofluoromethane	99	70-130	9/10/09 12:21		
Toluene-d8	105	70-130	9/10/09 12:21		

Comments:

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2488.D Vial: 9
Acq On : 10 Sep 2009 12:21 pm Operator: D.ZIMPFER
Sample : RQ0907884-01|1.0 Inst : MS #8
Misc : NG 8260B.787 T4 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 12:34 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	3.45	168	632323	50.00 ppb	-0.02
42) 1,4 - Difluorobenzene	3.97	114	1026190	50.00 ppb	-0.03
63) d5 - Chlorobenzene	6.33	117	832296	50.00 ppb	-0.04
83) d4 - Dichlorobenzene	8.54	152	334195	50.00 ppb	-0.04
System Monitoring Compounds					
43) surr4,Dibrflmethane	3.45	113	299133	49.74 ppb	-0.02
Spiked Amount 50.000	Range 89 - 119		Recovery = 99.48%		
48) surr1,1,2-Diclethane	3.69	65	233564	41.96 ppb	-0.03
Spiked Amount 50.000	Range 80 - 120		Recovery = 83.92%		
69) surr3,Toluene-d8	5.10	98	1151089	52.50 ppb	-0.03
Spiked Amount 50.000	Range 87 - 121		Recovery = 105.00%		
70) surr2,bfb	7.42	95	389480	47.81 ppb	-0.03
Spiked Amount 50.000	Range 85 - 122		Recovery = 95.62%		
Target Compounds					Qvalue
~~74) Chloroethane~~	~~1.71~~	~~64~~	~~2046~~	~~0.40 ppb #~~	~~61~~
~~13) Acrolein~~	~~2.01~~	~~56~~	~~74~~	~~0.22 ppb~~	~~86~~
~~16) Acetone~~	~~2.14~~	~~43~~	~~1219~~	~~1.47 ppb #~~	~~80~~
~~22) Methyl Acetate~~	~~2.24~~	~~43~~	~~230~~	~~Below Cal~~	~~90~~
23) Methylene Chloride	2.39	84	2413	0.41 ppb	93
~~36) Propionitrile~~	~~3.19~~	~~54~~	~~97~~	~~0.24 ppb #~~	~~1~~
~~40) Tetrahydrofuran~~	~~3.35~~	~~42~~	~~523~~	~~0.51 ppb #~~	~~35~~
~~57) 1,4-Dioxane~~	~~4.53~~	~~88~~	~~251~~	~~11.68 ppb #~~	~~67~~
~~64) 4-Methyl-2-Pentanone~~	~~4.99~~	~~43~~	~~458~~	~~Below Cal #~~	~~82~~
~~72) 2-Hexanone~~	~~5.62~~	~~43~~	~~1228~~	~~Below Cal #~~	~~27~~
~~86) Cyclohexanone~~	~~7.37~~	~~55~~	~~447~~	~~1.50 ppb #~~	~~63~~
~~108) Hexachlorobu~~	~~10.68~~	~~225~~	~~508~~	~~4.17 ppb #~~	~~85~~
109) Naphthalen	10.77	128	1722	0.21 ppb	99
110) 1,2,3-Tclbenzene	10.98	180	758	0.22 ppb	88

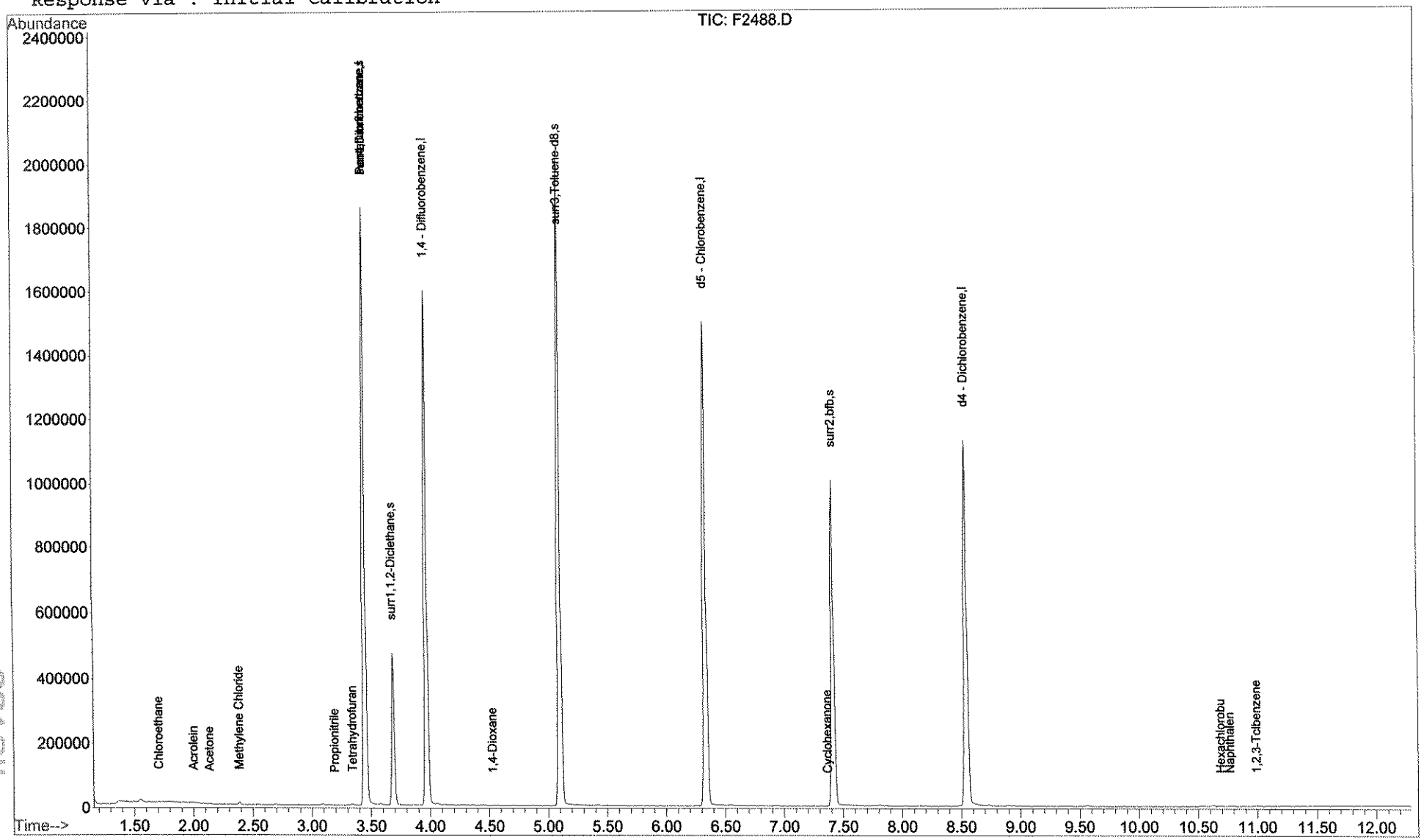
(#) = qualifier out of range (m) = manual integration
F2488.D W071709.M Thu Sep 10 12:34:17 2009

00133

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2488.D Vial: 9
Acq On : 10 Sep 2009 12:21 pm Operator: D.ZIMPFER
Sample : RQ0907884-01|1.0 Inst : MS #8
Misc : NG 8260B.787 T4 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 12:34 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: RQ0908463-01

Service Request: R0904817
Date Collected: NA
Date Received: NA

Units: µg/L
Basis: NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.23	U	1.0	0.23	1	NA	9/10/09 11:46		169786	
Isopropylbenzene (Cumene)	0.36	U	2.0	0.36	1	NA	9/10/09 11:46		169786	
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	1	NA	9/10/09 11:46		169786	
1,1,2-Trichloroethane	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	
1,1-Dichloroethane (1,1-DCA)	0.64	U	1.0	0.64	1	NA	9/10/09 11:46		169786	
1,1-Dichloroethene (1,1-DCE)	0.59	U	1.0	0.59	1	NA	9/10/09 11:46		169786	
1,1-Dichloropropene	0.39	U	2.0	0.39	1	NA	9/10/09 11:46		169786	
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	1	NA	9/10/09 11:46		169786	
1,2,3-Trichloropropane	0.64	U	2.0	0.64	1	NA	9/10/09 11:46		169786	
1,2,4-Trichlorobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 11:46		169786	
1,2,4-Trimethylbenzene	0.53	U	2.0	0.53	1	NA	9/10/09 11:46		169786	
1,2-Dibromo-3-chloropropane (DBCP)	0.61	U	5.0	0.61	1	NA	9/10/09 11:46		169786	
1,2-Dibromoethane	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	9/10/09 11:46		169786	
1,2-Dichloroethane	0.42	U	1.0	0.42	1	NA	9/10/09 11:46		169786	
1,2-Dichloropropane	0.36	U	1.0	0.36	1	NA	9/10/09 11:46		169786	
1,3,5-Trimethylbenzene	0.37	U	2.0	0.37	1	NA	9/10/09 11:46		169786	
1,3-Dichlorobenzene	0.84	U	2.0	0.84	1	NA	9/10/09 11:46		169786	
1,3-Dichloropropane	0.51	U	2.0	0.51	1	NA	9/10/09 11:46		169786	
1,4-Dichlorobenzene	0.44	U	2.0	0.44	1	NA	9/10/09 11:46		169786	
2,2-Dichloropropane	0.42	U	2.0	0.42	1	NA	9/10/09 11:46		169786	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	9/10/09 11:46		169786	
2-Chlorotoluene	0.48	U	5.0	0.48	1	NA	9/10/09 11:46		169786	
2-Hexanone	0.78	U	10	0.78	1	NA	9/10/09 11:46		169786	
2-Methyl-2-propanol	11	U	100	11	1	NA	9/10/09 11:46		169786	
4-Chlorotoluene	0.52	U	5.0	0.52	1	NA	9/10/09 11:46		169786	
4-Isopropyltoluene	0.42	U	2.0	0.42	1	NA	9/10/09 11:46		169786	
4-Methyl-2-pentanone	0.71	U	10	0.71	1	NA	9/10/09 11:46		169786	
Acetone	1.6	U	20	1.6	1	NA	9/10/09 11:46		169786	
Benzene	0.42	U	1.0	0.42	1	NA	9/10/09 11:46		169786	
Bromobenzene	0.46	U	2.0	0.46	1	NA	9/10/09 11:46		169786	
Bromochloromethane	0.54	U	2.0	0.54	1	NA	9/10/09 11:46		169786	
Bromodichloromethane	0.84	U	1.0	0.84	1	NA	9/10/09 11:46		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ0908463-01

Units: µg/L
Basis: NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.32	U	1.0	0.32	1	NA	9/10/09 11:46		169786	
Bromomethane	0.58	U	2.0	0.58	1	NA	9/10/09 11:46		169786	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	9/10/09 11:46		169786	
Chlorobenzene	0.44	U	1.0	0.44	1	NA	9/10/09 11:46		169786	
Chloroethane	0.36	U	2.0	0.36	1	NA	9/10/09 11:46		169786	
Chloroform	0.18	U	1.0	0.18	1	NA	9/10/09 11:46		169786	
Chloromethane	0.96	U	2.0	0.96	1	NA	9/10/09 11:46		169786	
Dibromochloromethane	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
Dibromomethane	0.54	U	1.0	0.54	1	NA	9/10/09 11:46		169786	
Dichlorodifluoromethane (CFC 12)	0.53	U	1.0	0.53	1	NA	9/10/09 11:46		169786	
Dichloromethane	0.50	U	2.0	0.50	1	NA	9/10/09 11:46		169786	
Diisopropyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 11:46		169786	
Ethyl tert-Butyl Ether	0.18	U	1.0	0.18	1	NA	9/10/09 11:46		169786	
Ethylbenzene	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
Hexachlorobutadiene	0.93	U	5.0	0.93	1	NA	9/10/09 11:46		169786	
Methyl tert-Butyl Ether	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	
Naphthalene	0.37	U	2.0	0.37	1	NA	9/10/09 11:46		169786	
Styrene	0.37	U	1.0	0.37	1	NA	9/10/09 11:46		169786	
Tetrachloroethene (PCE)	0.43	U	1.0	0.43	1	NA	9/10/09 11:46		169786	
Toluene	0.42	U	1.0	0.42	1	NA	9/10/09 11:46		169786	
Trichloroethene (TCE)	0.63	U	1.0	0.63	1	NA	9/10/09 11:46		169786	
Trichlorofluoromethane (CFC 11)	0.48	U	1.0	0.48	1	NA	9/10/09 11:46		169786	
Vinyl Chloride	0.52	U	1.0	0.52	1	NA	9/10/09 11:46		169786	
cis-1,2-Dichloroethene	0.48	U	1.0	0.48	1	NA	9/10/09 11:46		169786	
cis-1,3-Dichloropropene	0.38	U	1.0	0.38	1	NA	9/10/09 11:46		169786	
m,p-Xylenes	0.85	U	1.0	0.85	1	NA	9/10/09 11:46		169786	
n-Butylbenzene	0.40	U	2.0	0.40	1	NA	9/10/09 11:46		169786	
n-Propylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 11:46		169786	
o-Xylene	0.56	U	1.0	0.56	1	NA	9/10/09 11:46		169786	
sec-Butylbenzene	0.46	U	2.0	0.46	1	NA	9/10/09 11:46		169786	
tert-Amyl Methyl Ether	0.21	U	1.0	0.21	1	NA	9/10/09 11:46		169786	
tert-Butylbenzene	0.48	U	2.0	0.48	1	NA	9/10/09 11:46		169786	
trans-1,2-Dichloroethene	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ0908463-01

Units: µg/L
Basis: NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,3-Dichloropropene	0.25	U	1.0	0.25	1	NA	9/10/09 11:46		169786	
1,1,1-Trichloroethane (TCA)	0.45	U	1.0	0.45	1	NA	9/10/09 11:46		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	96	70-130	9/10/09 11:46		
Dibromofluoromethane	102	70-130	9/10/09 11:46		
Toluene-d8	106	70-130	9/10/09 11:46		

Comments:

Quantitation Report (Not Reviewed) LQ0908463-01,03

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2487.D Vial: 8
Acq On : 10 Sep 2009 11:46 am Operator: D.ZIMPFER
Sample : MBLK Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 11:58 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.45	168	617796	50.00	ppb	-0.02
42) 1,4 - Difluorobenzene	3.97	114	1006930	50.00	ppb	-0.02
63) d5 - Chlorobenzene	6.34	117	829947	50.00	ppb	-0.04
83) d4 - Dichlorobenzene	8.54	152	335253	50.00	ppb	-0.04
System Monitoring Compounds						
43) surr4,Dibrflmethane	3.45	113	302080	51.19	ppb	-0.02
Spiked Amount 50.000	Range 89 - 119		Recovery = 102.38%			
48) surr1,1,2-Diclethane	3.69	65	240542	44.04	ppb	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.08%			
69) surr3,Toluene-d8	5.10	98	1156306	52.89	ppb	-0.02
Spiked Amount 50.000	Range 87 - 121		Recovery = 105.78%			
70) surr2,bfb	7.42	95	388745	47.85	ppb	-0.03
Spiked Amount 50.000	Range 85 - 122		Recovery = 95.70%			
Target Compounds						Qvalue
~~4) Chloroethane~~	~~1.71~~	~~64~~	~~1451~~	~~0.29~~	~~ppb~~ #	~~57~~
18) Iodomethane	2.22	127	559	0.20	ppb	59 LT
~~22) Methyl Acetate~~	~~2.32~~	~~43~~	~~78~~	~~Below Cal~~		~~94~~
~~40) Tetrahydrofuran~~	~~3.35~~	~~42~~	~~1099~~	~~1.10~~	~~ppb~~ #	~~35~~
~~57) 1,4-Dioxane~~	~~4.45~~	~~88~~	~~347~~	~~16.45~~	~~ppb~~ #	~~45~~
~~64) 4-Methyl-2-Pentanone~~	~~4.96~~	~~43~~	~~322~~	~~Below Cal~~		~~97~~
~~86) Cyclohexanone~~	~~7.37~~	~~55~~	~~995~~	~~3.33~~	~~ppb~~ #	~~69~~
107) 1,2,4-Tcbenzene	10.53	180	1304	0.33	ppb #	59 LT
~~108) Hexachlorobu~~	~~10.69~~	~~225~~	~~595~~	~~4.21~~	~~ppb~~ #	~~84~~ LTLR
109) Naphthalen	10.78	128	2921	0.35	ppb #	85 LT
110) 1,2,3-Tclbenzene	11.00	180	1330	0.39	ppb	92 LT

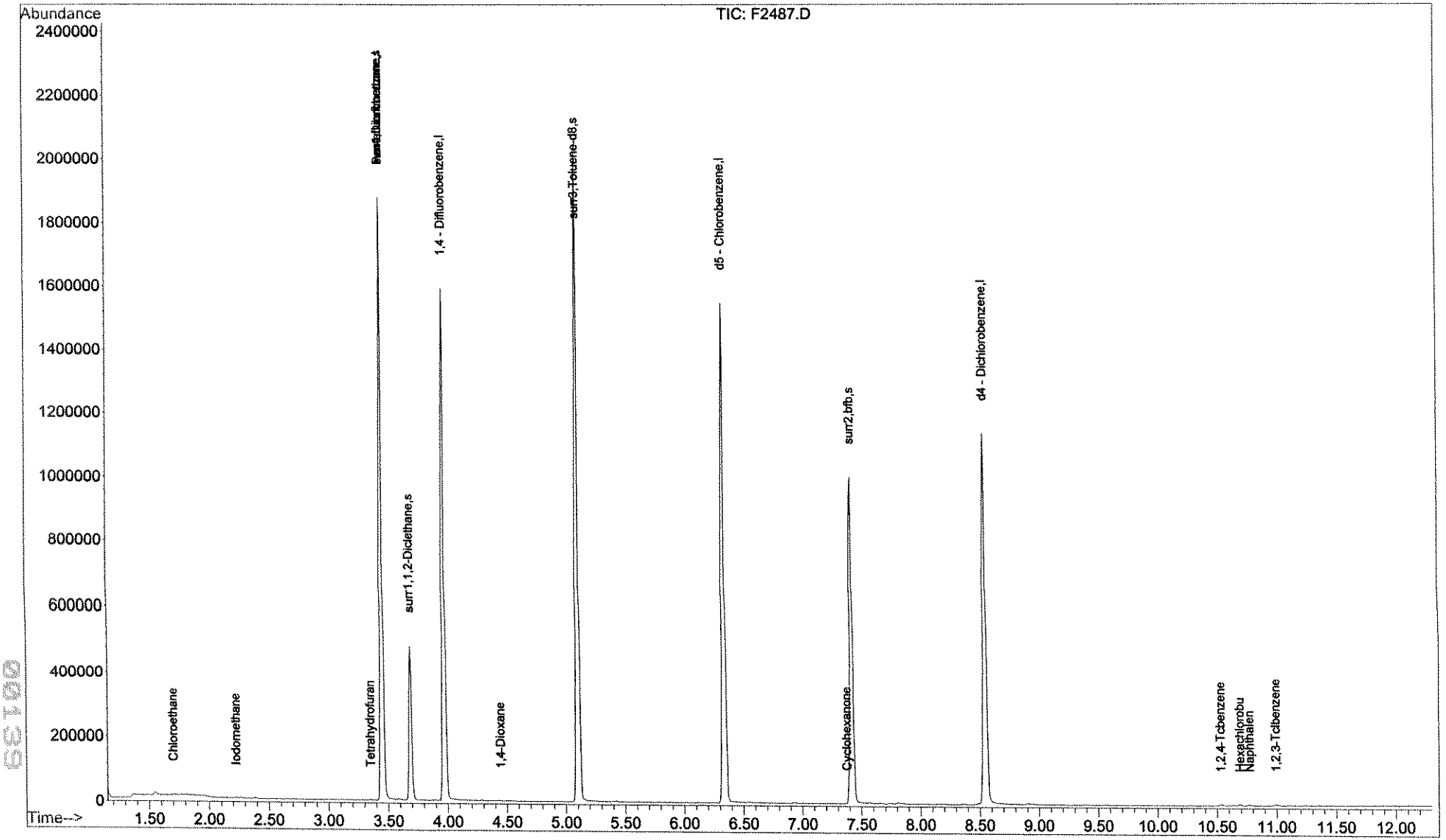
DJG/11

(#) = qualifier out of range (m) = manual integration
F2487.D W071709.M Thu Sep 10 11:59:06 2009

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2487.D Vial: 8
Acq On : 10 Sep 2009 11:46 am Operator: D.ZIMPFER
Sample : MBLK Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 11:58 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration



Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Sample Name: Lab Control Sample
Lab Code: RQ0908463-02

Service Request: R0904817
Date Collected: NA
Date Received: NA

Units: µg/L
Basis: NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	**22.8**		1.0	0.23	1	NA	9/10/09 10:50		169786	
Isopropylbenzene (Cumene)	**25.2**		2.0	0.36	1	NA	9/10/09 10:50		169786	
1,1,2,2-Tetrachloroethane	**19.8**		1.0	0.44	1	NA	9/10/09 10:50		169786	
1,1,2-Trichloroethane	**18.9**		1.0	0.45	1	NA	9/10/09 10:50		169786	
1,1-Dichloroethane (1,1-DCA)	**22.7**		1.0	0.64	1	NA	9/10/09 10:50		169786	
1,1-Dichloroethene (1,1-DCE)	**22.6**		1.0	0.59	1	NA	9/10/09 10:50		169786	
1,1-Dichloropropene	**23.2**		2.0	0.39	1	NA	9/10/09 10:50		169786	
1,2,3-Trichlorobenzene	**22.0**		2.0	0.43	1	NA	9/10/09 10:50		169786	
1,2,3-Trichloropropane	**17.5**		2.0	0.64	1	NA	9/10/09 10:50		169786	
1,2,4-Trichlorobenzene	**23.1**		2.0	0.46	1	NA	9/10/09 10:50		169786	
1,2,4-Trimethylbenzene	**23.6**		2.0	0.53	1	NA	9/10/09 10:50		169786	
1,2-Dibromo-3-chloropropane (DBCP)	**18.0**		5.0	0.61	1	NA	9/10/09 10:50		169786	
1,2-Dibromoethane	**19.5**		1.0	0.43	1	NA	9/10/09 10:50		169786	
1,2-Dichlorobenzene	**22.9**		2.0	0.40	1	NA	9/10/09 10:50		169786	
1,2-Dichloroethane	**19.3**		1.0	0.42	1	NA	9/10/09 10:50		169786	
1,2-Dichloropropane	**21.2**		1.0	0.36	1	NA	9/10/09 10:50		169786	
1,3,5-Trimethylbenzene	**23.8**		2.0	0.37	1	NA	9/10/09 10:50		169786	
1,3-Dichlorobenzene	**24.3**		2.0	0.84	1	NA	9/10/09 10:50		169786	
1,3-Dichloropropane	**19.8**		2.0	0.51	1	NA	9/10/09 10:50		169786	
1,4-Dichlorobenzene	**23.9**		2.0	0.44	1	NA	9/10/09 10:50		169786	
2,2-Dichloropropane	**22.9**		2.0	0.42	1	NA	9/10/09 10:50		169786	
2-Butanone (MEK)	**15.6**		10	1.0	1	NA	9/10/09 10:50		169786	
2-Chlorotoluene	**22.9**		5.0	0.48	1	NA	9/10/09 10:50		169786	
2-Hexanone	**15.6**		10	0.78	1	NA	9/10/09 10:50		169786	
2-Methyl-2-propanol	**347**		100	11	1	NA	9/10/09 10:50		169786	
4-Chlorotoluene	**23.7**		5.0	0.52	1	NA	9/10/09 10:50		169786	
4-Isopropyltoluene	**25.4**		2.0	0.42	1	NA	9/10/09 10:50		169786	
4-Methyl-2-pentanone	**16.6**		10	0.71	1	NA	9/10/09 10:50		169786	
Acetone	**18.1**	J	20	1.6	1	NA	9/10/09 10:50		169786	
Benzene	**22.7**		1.0	0.42	1	NA	9/10/09 10:50		169786	
Bromobenzene	**22.4**		2.0	0.46	1	NA	9/10/09 10:50		169786	
Bromochloromethane	**19.9**		2.0	0.54	1	NA	9/10/09 10:50		169786	
Bromodichloromethane	**20.8**		1.0	0.84	1	NA	9/10/09 10:50		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0908463-02	**Basis:**	NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	**19.6**		1.0	0.32	1	NA	9/10/09 10:50		169786	
Bromomethane	**24.1**		2.0	0.58	1	NA	9/10/09 10:50		169786	
Carbon Tetrachloride	**23.8**		1.0	0.36	1	NA	9/10/09 10:50		169786	
Chlorobenzene	**23.1**		1.0	0.44	1	NA	9/10/09 10:50		169786	
Chloroethane	**24.5**		2.0	0.36	1	NA	9/10/09 10:50		169786	
Chloroform	**22.3**		1.0	0.18	1	NA	9/10/09 10:50		169786	
Chloromethane	**23.3**		2.0	0.96	1	NA	9/10/09 10:50		169786	
Dibromochloromethane	**20.8**		1.0	0.43	1	NA	9/10/09 10:50		169786	
Dibromomethane	**17.3**		1.0	0.54	1	NA	9/10/09 10:50		169786	
Dichlorodifluoromethane (CFC 12)	**20.6**		1.0	0.53	1	NA	9/10/09 10:50		169786	
Dichloromethane	**21.6**		2.0	0.50	1	NA	9/10/09 10:50		169786	
Diisopropyl Ether	**19**		1.0	0.18	1	NA	9/10/09 10:50		169786	
Ethyl tert-Butyl Ether	**18**		1.0	0.18	1	NA	9/10/09 10:50		169786	
Ethylbenzene	**23.8**		1.0	0.43	1	NA	9/10/09 10:50		169786	
Hexachlorobutadiene	**24.2**		5.0	0.93	1	NA	9/10/09 10:50		169786	
Methyl tert-Butyl Ether	**17.6**		1.0	0.45	1	NA	9/10/09 10:50		169786	
Naphthalene	**18.6**		2.0	0.37	1	NA	9/10/09 10:50		169786	
Styrene	**23.8**		1.0	0.37	1	NA	9/10/09 10:50		169786	
Tetrachloroethene (PCE)	**25.5**		1.0	0.43	1	NA	9/10/09 10:50		169786	
Toluene	**23.0**		1.0	0.42	1	NA	9/10/09 10:50		169786	
Trichloroethene (TCE)	**23.5**		1.0	0.63	1	NA	9/10/09 10:50		169786	
Trichlorofluoromethane (CFC 11)	**26.0**		1.0	0.48	1	NA	9/10/09 10:50		169786	
Vinyl Chloride	**24.7**		1.0	0.52	1	NA	9/10/09 10:50		169786	
cis-1,2-Dichloroethene	**21.0**		1.0	0.48	1	NA	9/10/09 10:50		169786	
cis-1,3-Dichloropropene	**19.5**		1.0	0.38	1	NA	9/10/09 10:50		169786	
m,p-Xylenes	**48.0**		1.0	0.85	1	NA	9/10/09 10:50		169786	
n-Butylbenzene	**24.5**		2.0	0.40	1	NA	9/10/09 10:50		169786	
n-Propylbenzene	**24.1**		2.0	0.48	1	NA	9/10/09 10:50		169786	
o-Xylene	**24.0**		1.0	0.56	1	NA	9/10/09 10:50		169786	
sec-Butylbenzene	**25.6**		2.0	0.46	1	NA	9/10/09 10:50		169786	
tert-Amyl Methyl Ether	**19**		1.0	0.21	1	NA	9/10/09 10:50		169786	
tert-Butylbenzene	**25.2**		2.0	0.48	1	NA	9/10/09 10:50		169786	
trans-1,2-Dichloroethene	**21.6**		1.0	0.45	1	NA	9/10/09 10:50		169786	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0908463-02	**Basis:**	NA

SPLP Volatile Organics

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,3-Dichloropropene	**18.4**		1.0	0.25	1	NA	9/10/09 10:50		169786	
1,1,1-Trichloroethane (TCA)	**23.0**		1.0	0.45	1	NA	9/10/09 10:50		169786	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	96	70-130	9/10/09 10:50		
Dibromofluoromethane	101	70-130	9/10/09 10:50		
Toluene-d8	104	70-130	9/10/09 10:50		

Comments:

Quantitation Report (Not Reviewed) KQ0608463-02,04

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2485.D Vial: 6
Acq On : 10 Sep 2009 10:50 am Operator: D.ZIMPFER
Sample : LCS Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 11:02 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

D2 9/10

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	3.45	168	645219	50.00	ppb	-0.02
42) 1,4 - Difluorobenzene	3.97	114	1052491	50.00	ppb	-0.02
63) d5 - Chlorobenzene	6.34	117	867425	50.00	ppb	-0.03
83) d4 - Dichlorobenzene	8.55	152	371639	50.00	ppb	-0.03
System Monitoring Compounds						
43) surr4,Dibrflmethane	3.45	113	310441	50.33	ppb	-0.02
Spiked Amount 50.000	Range 89 - 119		Recovery = 100.66%			
48) surr1,1,2-Diclethane	3.69	65	242664	42.51	ppb	-0.03
Spiked Amount 50.000	Range 80 - 120		Recovery = 85.02%			
69) surr3,Toluene-d8	5.11	98	1185312	51.87	ppb	-0.02
Spiked Amount 50.000	Range 87 - 121		Recovery = 103.74%			
70) surr2,bfb	7.42	95	407446	47.99	ppb	-0.03
Spiked Amount 50.000	Range 85 - 122		Recovery = 95.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.25	85	127402	20.60	ppb	100
4) Chloromethane	1.37	50	176671	23.31	ppb	100
5) Vinyl Chloride	1.43	62	182025	24.70	ppb	100
6) Bromomethane	1.63	96	98053	24.07	ppb	98
7) Chloroethane	1.68	64	126242	24.46	ppb	97
8) FREON 21	1.78	67	244870	21.23	ppb	99
9) Trichlorofluoromethane	1.83	101	184074	26.04	ppb	99 Rounds L
10) Diethyl Ether	1.98	59	72070	17.51	ppb	98
11) FREON 123A	1.97	85	64539	20.87	ppb	86
12) FREON 123	2.00	85	110771	19.98	ppb	97
13) Acrolein	2.05	56	27895	79.47	ppb	97
14) FREON 113	2.10	85	54377	24.75	ppb	95
15) 1,1-Diclethene	2.12	96	118841	22.57	ppb	95
16) Acetone	2.14	43	15337	18.09	ppb	93
17) 2-Propanol	2.19	45	54546	334.51	ppb	96
18) Iodomethane	2.22	127	74948	26.17	ppb	94
19) Carbon Disulfide	2.27	76	395964	22.82	ppb	99
20) Acetonitrile	2.30	40	23594	109.27	ppb #	42
21) Allyl Chloride	2.32	76	73376	21.06	ppb	95
22) Methyl Acetate	2.31	43	65610	17.88	ppb	99
23) Methylene Chloride	2.39	84	131368	21.62	ppb	98
24) TBA	2.42	59	78250	346.85	ppb	99
25) Acrylonitrile	2.52	53	105498	83.41	ppb	99
26) Methyl-t-Butyl Ether	2.54	73	207989	17.60	ppb	98
27) trans-1,2-Dichloroethene	2.55	96	131664	21.63	ppb	99
28) 1,1-Diclethane	2.79	63	255287	22.73	ppb	98
29) DIPE	2.81	45	458745	19.28	ppb	99
30) Vinyl Acetate	2.80	86	7917	12.96	ppb	70
31) 2-Chloro-1,3-butadiene	2.85	53	216055	25.94	ppb	100
32) ETBE	3.03	59	308402	18.24	ppb	99
33) 2,2-Dichloropropane	3.16	77	203442	22.86	ppb	99
34) 2-Butanone	3.15	43	27108	15.56	ppb	100
35) cis-1,2-Dichloroethene	3.15	96	141543	21.03	ppb	97
36) Propionitrile	3.19	54	34575	85.01	ppb	97
37) Methacrylonitrile	3.29	67	23376	16.58	ppb	85

50-150

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2485.D Vial: 6
Acq On : 10 Sep 2009 10:50 am Operator: D.ZIMPFER
Sample : LCS Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 11:02 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Bromochloromethane	3.31	128	50739	19.87	ppb	94
39)	Chloroform	3.34	83	231195	22.33	ppb	97
40)	Tetrahydrofuran	3.35	42	16455	15.74	ppb	98
41)	1,1,1-Trichloroethane	3.49	97	189485	23.03	ppb	99
44)	cyclohexane	3.53	56	245545	21.29	ppb	99
45)	Carbontetrachloride	3.59	117	150484	23.83	ppb	100
46)	1,1-Dichloropropene	3.59	75	198094	23.23	ppb	98
47)	Iso-Butyl Alcohol	3.61	43	42962	329.90	ppb	99
49)	Benzene	3.73	78	567615	22.72	ppb	99
50)	1,2-Dichloroethane	3.74	62	113773	19.33	ppb	98
51)	TAME	3.79	73	246782	18.53	ppb	97
52)	N-Heptane	3.88	43	233099	22.01	ppb	95
53)	Trichloroethene	4.17	95	138937	23.48	ppb	96
54)	methylcyclohexane	4.32	55	195154	20.97	ppb	99
55)	1,2-Diclpropane	4.35	63	132295	21.21	ppb	95
56)	Methyl Methacrylate	4.40	69	41696	15.66	ppb	85
57)	1,4-Dioxane	4.44	88	9660	438.18	ppb	80
58)	Dibromomethane	4.43	93	50767	17.32	ppb	97
59)	Bromodichloromethane	4.53	83	148675	20.75	ppb	98
61)	2-Chloroethylvinyl Ether	4.74	63	41564	14.78	ppb	99
62)	cis-1,3-Dichloropropene	4.88	75	177454	19.53	ppb	96
64)	4-Methyl-2-Pentanone	4.99	43	57065	16.56	ppb	98
65)	Toluene	5.16	91	558448	22.97	ppb	99
66)	trans-1,3-Dichloropropene	5.32	75	130925	18.38	ppb	99
67)	Ethyl Methacrylate	5.38	69	84352	16.21	ppb	99
68)	1,1,2-Trichloroethane	5.48	83	60313	18.92	ppb	98
71)	Tetrachloroethene	5.62	166	134854	25.50	ppb	99
72)	2-Hexanone	5.68	43	38048	15.59	ppb	90
73)	N-Butyl Acetate	5.77	43	94472	13.82	ppb	98
74)	1,3-Dichloropropane	5.63	76	135754	19.84	ppb	91
75)	Dibromochloromethane	5.83	129	81048	20.78	ppb	100
76)	1,2-Dibromoethane	5.94	107	63537	19.46	ppb	99
77)	Chlorobenzene	6.36	112	323150	23.06	ppb	99
78)	1,1,1,2-Tetrachloroethane	6.43	131	100921	22.75	ppb	98
79)	Ethylbenzene	6.45	91	628302	23.80	ppb	98
80)	(m+p)Xylene	6.56	106	454394	48.01	ppb	97
81)	o-Xylene	6.92	106	214380	24.00	ppb	97
82)	Styrene	6.93	104	345692	23.75	ppb	98
84)	Bromoform	7.12	173	38869	19.57	ppb	93
85)	Isopropylbenzene	7.27	105	565961	25.18	ppb	97
86)	Cyclohexanone	7.38	55	106163	320.24	ppb	95
87)	1,1,2,2-Tetrachloroethane	7.54	83	73453	19.84	ppb	97
88)	Trans-1,4-Dichloro-2-buten	7.60	53	17504	21.88	ppb	95
89)	1,2,3-Trichloropropane	7.60	110	18100	17.53	ppb	97
90)	n-Propylbenzene	7.66	91	681630	24.07	ppb	100
91)	Bromobenzene	7.58	156	112470	22.38	ppb	91
93)	1,3,5-Trimethylbenzene	7.83	105	444003	23.84	ppb	98
94)	2-Chlorotoluene	7.75	91	382747	22.88	ppb	99
95)	4-Chlorotoluene	7.86	91	442674	23.71	ppb	99
96)	tert-Butylbenzene	8.15	119	386313	25.17	ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2485.D Vial: 6
Acq On : 10 Sep 2009 10:50 am Operator: D.ZIMPFER
Sample : LCS Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 11:02 2009 Quant Results File: W071709.RES

Quant Method : J:\ACQUDATA\M...\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration
DataAcq Meth : W071709

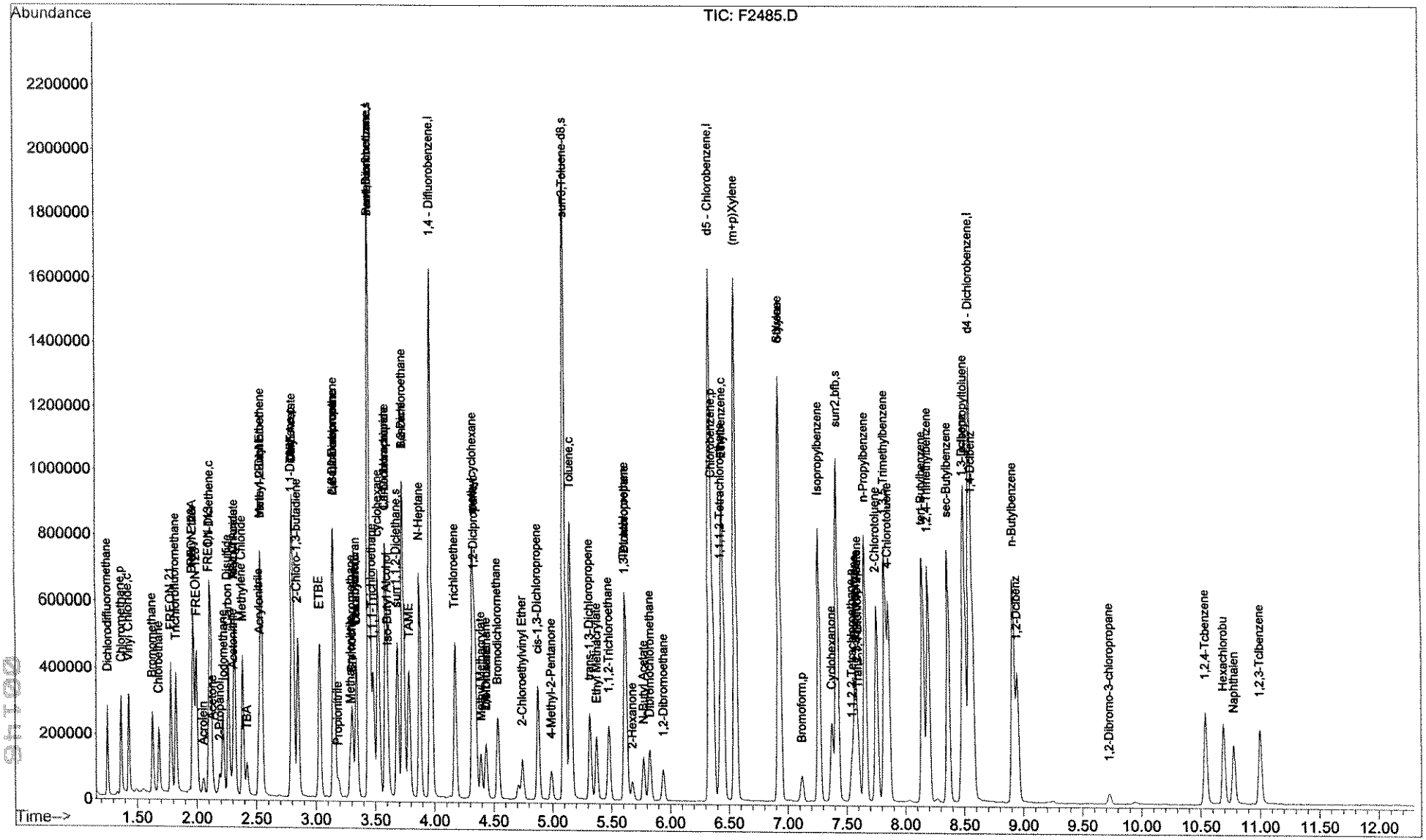
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
97)	1,2,4-Trimethylbenzene	8.19	105	429226	23.60 ppb	98
98)	sec-Butylbenzene	8.36	105	593279	25.56 ppb	99
99)	p-Isopropyltoluene	8.51	119	468015	25.37 ppb	97
100)	1,3-Dclbenz	8.49	146	221353	24.25 ppb	97
101)	1,4-Dclbenz	8.57	146	217197	23.94 ppb	99
103)	n-Butylbenzene	8.91	91	431595	24.53 ppb	97
104)	1,2-Dclbenz	8.95	146	185284	22.85 ppb	97
105)	1,2-Dibromo-3-chloropropan	9.73	157	10142	18.00 ppb	95
107)	1,2,4-Tcbenzene	10.54	180	102160	23.09 ppb	96
108)	Hexachlorobu	10.69	225	47496	24.24 ppb	98
109)	Naphthalen	10.78	128	170911	18.55 ppb	99
110)	1,2,3-Tclbenzene	11.00	180	82976	21.95 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\MSVOA8\DATA\091009\F2485.D Vial: 6
Acq On : 10 Sep 2009 10:50 am Operator: D.ZIMPFER
Sample : LCS Inst : MS #8
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 11:02 2009 Quant Results File: W071709.RES

Method : J:\ACQUDATA\MSVOA8\METHODS\W071709.M (RTE Integrator)
Title : 8260voa
Last Update : Tue Sep 01 12:56:12 2009
Response via : Initial Calibration



F2485.D W071709.M Thu Sep 10 11:02:34 2009

Preparation Information Benchsheet

Prep Run#: 94806
Team: Metals/DBOND

Prep WorkFlow: SPLP-ZHE
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/27/09 12:00

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0907884-01	MB		25.000g	EPA 1312/SPLP ZHE				500.00mL			
2	R0904817-002	SA64-10BSPLP3	.05	25.000g	EPA 1312/SPLP ZHE				500.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/27/09 12:00
Finished: 8/28/09 06:00
By: DBOND

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: 8/28/09

Received By: _____ Date: 8/28/09

Extracts Examined (Yes) No

Lims # 94806

SPLP-VOA ZHE EXTRACTION
METHOD 1312

Date: 8/27/09 **Analyst:** DCD

RQ0907884-01

Order #	002	method blank		
Submission #	RQ0907817			
Analysis	8021 // (8260)	8021 // (8260)	8021 // 8260	8021 // 8260
Other Analytes				
Sample Description	brown medium	Colorless clear		
ZHE Extraction Vessel (# or letter)	O	RW		
Rotator #				
Percent Solid Determination	Yes (Not Applicable)	Yes (Not Applicable)	Yes Not Applicable	Yes Not Applicable
wgt of total sample:	— 25.0	—		
wgt of liquid:	—	—		
wgt of solid:	25.0	—		
% Solids:	100 %	—		
wgt of sample extracted:	25.0	—		
amount of Ext. Fluid: (20x%Solidsxwgt of total sample/100)	500	500		
Extraction Fluid Determination				
Particle size reduction (Will sample pass through a 9.5mm sieve?)	(Yes) No	(Yes) No	Yes No	Yes No
Extraction Fluid #3: ASTM Type II water	6.82	6.82		
Record of Extraction				
Extraction start Time	1200	1200		
Extraction stop Time	600	600		
Time of Filtration				
Extraction start Temperature	22	22		
Extraction stop Temperature	24	24		
Are initial and final extracts compatible (If applicable)	Yes No	Yes No	Yes No	Yes No

9/2/09 DLD

Analysis: 8260B. H_2O Analyst: D. Zimpfer Tune Method: T071709

Date: 7.17.2009 Data Path: j:\acqudata\msvoa 8 \071709 Run Method: W071709

Instr. MSVOA 8 LIMS Run#:

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	0.5 PPB STD								F1080	—	
4	Tune								81	YY	1ul Surr 500 → 100 mL DI
5	Blk								82	—	
6	Instrument Blank			MSVMet 1					83	YB	
7	0.5 PPB		10ul each 10 → 1ml MeOH inject 5ul → 50mL H_2O						84	Y	
8	1.0		10ul						85	Y	
9	2.0		↓ 20ul ↓						86	Y	
10	5.0		inject 1ul each 1° → 100mL						87	Y	
11	10		1ul each 1° → 50mL						88	Y	
12	50		5ul						89	Y	
13	100		10ul	MSV2x					F1090	Y	
14	200		20ul ↓	4x					91	Y	
15	Blk								92	—	
16	Blk								93	—	
17	50 PPB ICV								94		
18	Blk								95	—	

DL 7/10

All samples = 10 mL + 5 uL ~~Combined IS~~/Surr 10 mL purged

T/G Primary 500 : 10820 5ul
HSL Primary ↓ : 10859 ↓
Fxt Primary ↓ : 10772 ↓
OxU Primary 500 : 10613 5ul
→ 50mL = ccv

T/G Secondary 200 : 10870 2ul | 5ul
HSL Secondary 200 : 10669 2ul | 5ul
Fxt Secondary 500 : 10703 5ul | 12.5ul
OxU Secondary 200 : 10612 2ul
= LCS/LCSD

~~Comb. IS~~/Surr. 500 : 10801
Surrogate 100 : ~~10635~~ 10963
Internal Std. 100 : ~~10633~~ 10961

00053

Analysis: B260R
Analyst: W. Zimpfer
Tune Method: T071709
Date: 9/10/2009
Data Path: j:\acqudata\msvoa8\
Run Method: W071709
Instr. MSVOA8
LIMS Run#: 169786

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	Blk								F2481	-	
2	Blk								82	-	
3	Tune								83	YT	
4	CCV								84	YL	
5	LCS		-02 / 04						85	YQ	
6	MBlk								86	(N)	
7	MBlk		8463-01 / -03						87	YB	
8	R2907889-01	1/1		[redacted]	6456	124	11	7	88	Y	
9	9817-002	1/1						7	89	Y	
10	R2907886-01	1/1		[redacted]	VBS	9816	1	7	F2490	Y	
11	9814-001	1/10	5mL→50mL				1	7	91	Y	
12	R2907885-01	1/1					1	7	92	Y	
13	9942-001	1/10	5mL→50mL				1	7	93	Y	Bot 1/100
14	9982-001	1/2	25mL→50mL				1	≤2	94	Y	1,4-dioxane
15	-002	1/1					1	≤2	95	Y	
16	9987-001	1/50	5mL→10mL				1	≤2	96	Y	1,4-dioxane
17	5086-006	1/1		[redacted]	4764	12	2	≤2	97	Y	
18	-008	1/1					2	≤2	98	Y	
19	-009	1/1					2	≤2	99	Y	Bot 1/10
20	-010	1/1					2	≤2	F2500	(N)	xover Tet
21	-011	1/1					2	≤2	01	(N)	xover
22	-012	1/1					2	≤2	02	Y	
23	-013	1/1					2	≤2	03	Y	
24	BS	1/1							04	Y	Misspiked Freon
25	BSD	1/1							05	Y	
26	Blk										
27	↓										
28											
29											
30											
31											

All samples = 10 mL + 5 uL ~~Combined~~ IS/Surr 10 mL purged

T/G Primary 500 : 11831 5ul
HSL Primary : 11957
Frt Primary : 11858
Primary :
50mL-CCV

T/G Secondary 500 : 11958 2ul 5.1
HSL Secondary 500 : 11592 2ul 5.1
Frt Secondary 200 : 11969 5ul 12.5
Secondary :
250mL-LCS/SPK

Comb. IS/Surr. 500 : ~~11836~~ 11837
Surrogate 100 : ~~11837~~ 11838
Internal Std. 100 : ~~11~~ 11936

00102

SEMIVOLATILE ORGANICS

QC SUMMARY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/ 9/09 - 9/10/09

Lab Control Sample Summary
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 95122

Analyte Name	Lab Control Sample RQ0908092-02 Result	Expected	% Rec		Duplicate Lab Control Sample RQ0908092-03 Result	Expected	% Rec		% Rec Limits	RPD		RPD Limit
2-Methylnaphthalene	**3.65**	4.00	91		**3.80**	4.00	95		50 - 120	4		30
Acenaphthene	**3.35**	4.00	84		**3.78**	4.00	95		50 - 120	12		30
Acenaphthylene	**3.43**	4.00	86		**3.80**	4.00	95		50 - 120	10		30
Anthracene	**3.63**	4.00	91		**3.70**	4.00	93		50 - 120	2		30
Benz(a)anthracene	**3.92**	4.00	98		**3.75**	4.00	94		50 - 120	4		30
Benzo(a)pyrene	**3.29**	4.00	82		**3.30**	4.00	83		50 - 120	0		30
Benzo(b)fluoranthene	**3.70**	4.00	93		**3.98**	4.00	100		50 - 120	7		30
Benzo(g,h,i)perylene	**3.30**	4.00	83		**4.22**	4.00	106		50 - 120	24		30
Benzo(k)fluoranthene	**3.73**	4.00	93		**3.68**	4.00	92		50 - 120	1		30
Bis(2-ethylhexyl) Phthalate	**4.10**	4.00	103		**3.81**	4.00	95		50 - 120	7		30
Butyl Benzyl Phthalate	**3.61**	4.00	90		**3.26**	4.00	82		50 - 120	10		30
Chrysene	**3.73**	4.00	93		**3.63**	4.00	91		50 - 120	3		30
Di-n-butyl Phthalate	**3.94**	4.00	99		**3.83**	4.00	96		50 - 120	3		30
Di-n-octyl Phthalate	**3.39**	4.00	85		**3.31**	4.00	83		50 - 120	2		30
Dibenz(a,h)anthracene	**3.57**	4.00	89		**3.94**	4.00	99		50 - 120	10		30
Diethyl Phthalate	**3.44**	4.00	86		**4.02**	4.00	101		50 - 120	16		30
Dimethyl Phthalate	**3.19**	4.00	80		**3.72**	4.00	93		50 - 120	15		30
Fluoranthene	**3.90**	4.00	98		**4.07**	4.00	102		50 - 120	4		30
Fluorene	**3.58**	4.00	90		**4.26**	4.00	107		50 - 120	17		30
Hexachlorobenzene	**3.93**	4.00	98		**3.81**	4.00	95		50 - 120	3		30
Indeno(1,2,3-cd)pyrene	**3.48**	4.00	87		**3.97**	4.00	99		50 - 120	13		30
Naphthalene	**3.30**	4.00	83		**3.44**	4.00	86		50 - 120	4		30
Nitrobenzene	**3.57**	4.00	89		**3.89**	4.00	97		50 - 120	9		30
Phenanthrene	**3.58**	4.00	90		**3.70**	4.00	93		50 - 120	3		30
Pyrene	**3.67**	4.00	92		**3.54**	4.00	89		50 - 120	4		30
Pyridine	**0.750**	4.00	19	*	**0.420**	4.00	11	*	50 - 120	56	*	30
1,4-Dioxane	**2.45**	5.00	49	*	**2.28**	5.00	46	*	50 - 120	7		30
Octachlorostyrene	**3.01**	4.00	75		**3.11**	4.00	78		50 - 120	3		30

Comments:

4B

EPA SAMPLE NO.

SEMIVOLATILE METHOD BLANK SUMMARY

SBLK1

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: SDG No.: SA64-10B SDG 2

Lab File ID: DB555.D Lab Sample ID: RQ0908092-01|1.0

Instrument ID: 5973-B Date Extracted: 9/2/09

Matrix: (soil/water) WATER Date Analyzed: 9/9/09

Level: (low/med) LOW Time Analyzed: 21:10

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SBLK1MS	RQ0908092-02|1.0	DB556.D	9/9/09
02	SBLK1MSD	RQ0908092-03|1.0	DB571.D	9/10/09
03	SA64-10BSPLP2	R0904817-001|1.0	DB572.D	9/10/09
04	SA64-10BSPLP3	R0904817-002|1.0	DB573.D	9/10/09
05	SA64-10BSPLP2 Re	R0904817-001|1.0	DB586.D	9/10/09
06	SA64-10BSPLP3 Re	R0904817-002|1.0	DB585.D	9/10/09
07	EQBLK1	RQ0908042-01|1.0	DB574.D	9/10/09
08	EQBLK2	RQ0908043-01|1.0	DB575.D	9/10/09

COMMENTS:

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: _____ SDG No.: SA64-10B sdg2

Lab File ID: DB256.D DFTPP Injection Date: 8/19/09

Instrument ID: 5973-B DFTPP Injection Time: 10:26

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	55.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	57.3
70	Less than 2.0% of mass 69	0.4 (0.6)1
127	40.0 - 60.0% of mass 198	57.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.4
275	10.0 - 30.0% of mass 198	26.8
365	Greater than 1.0% of mass 198	5.9
441	Present, but less than mass 443	15.9
442	40.0 - 100.0% of mass 198	85.7
443	17.0 - 23.0% of mass 442	16.6 (19.4)2

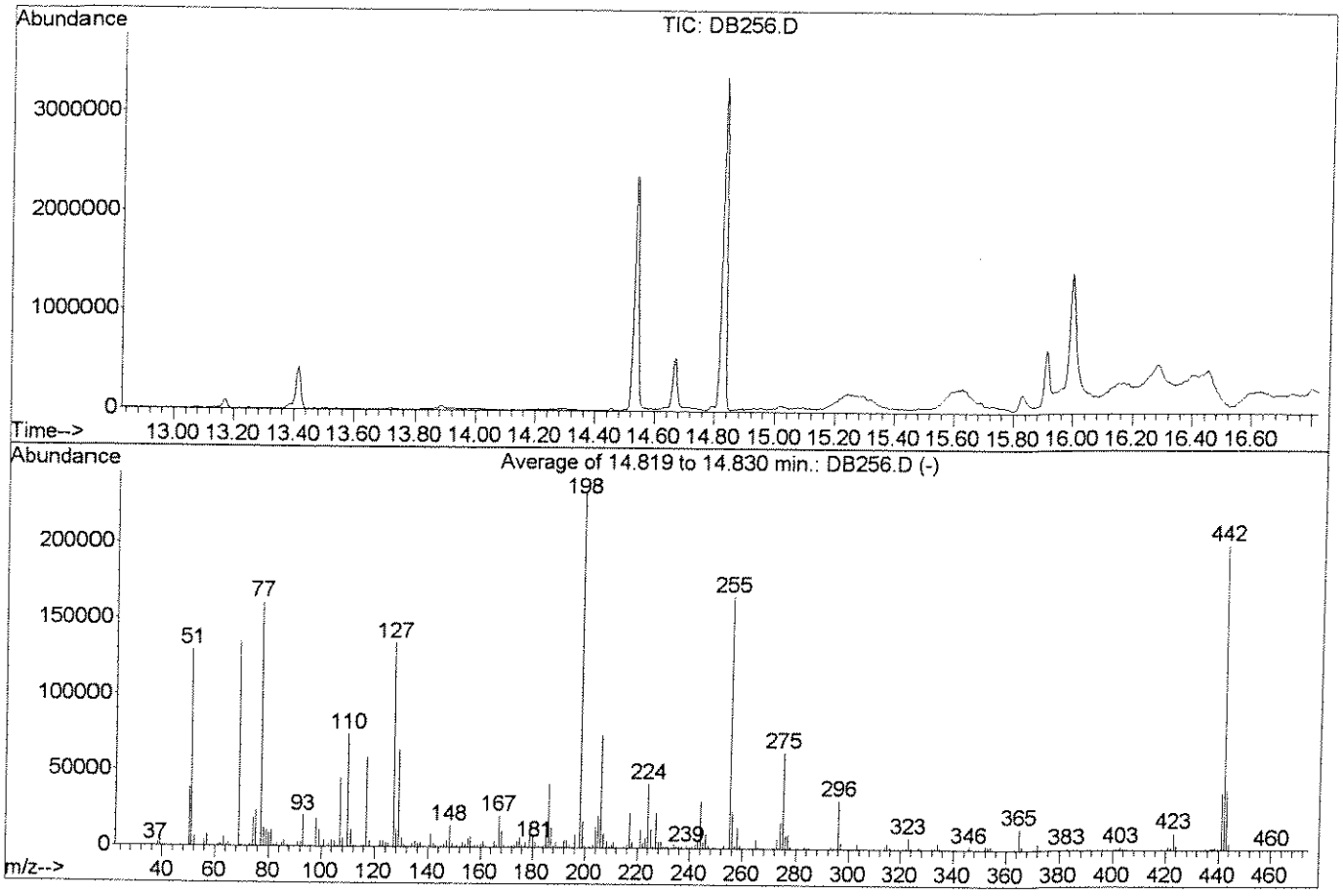
1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD001	SSTD001	DB260.D	8/19/09	13:32
02	SSTD002	SSTD002	DB261.D	8/19/09	14:18
03	SSTD005	SSTD005	DB262.D	8/19/09	15:05
04	SSTD010	SSTD010	DB263.D	8/19/09	15:52
05	SSTD020	SSTD020	DB264.D	8/19/09	16:38
06	SSTD030	SSTD030	DB265.D	8/19/09	17:22
07	SSTD040	SSTD040	DB266.D	8/19/09	18:06
08	SSTD050	SSTD050	DB267.D	8/19/09	18:48
09	SSTD100	SSTD100	DB268.D	8/19/09	19:29

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\081909\DB256.D Vial: 1
Acq On : 19 Aug 2009 10:26 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



AutoFind: Scans 1166, 1167, 1168; Background Corrected with Scan 1162

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	55.0	129211	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	57.3	134537	PASS
70	69	0.00	2	0.6	824	PASS
127	198	40	60	57.2	134408	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	234917	PASS
199	198	5	9	7.4	17313	PASS
275	198	10	30	26.8	63039	PASS
365	198	1	100	5.9	13816	PASS
441	443	0.01	100	95.8	37444	PASS
442	198	40	100	85.7	201412	PASS
443	442	17	23	19.4	39088	PASS

DB256.D DFTPPLVI.M Thu Aug 20 09:09:41 2009

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: _____ SDG No.: SA64-10B SPLP2

Lab File ID: DB539.D DFTPP Injection Date: 9/9/09

Instrument ID: 5973-B DFTPP Injection Time: 9:51

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.0
70	Less than 2.0% of mass 69	0.5 (0.9)1
127	40.0 - 60.0% of mass 198	54.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	28.2
365	Greater than 1.0% of mass 198	7.9
441	Present, but less than mass 443	14.9
442	40.0 - 100.0% of mass 198	72.2
443	17.0 - 23.0% of mass 442	15.6 (21.7)2

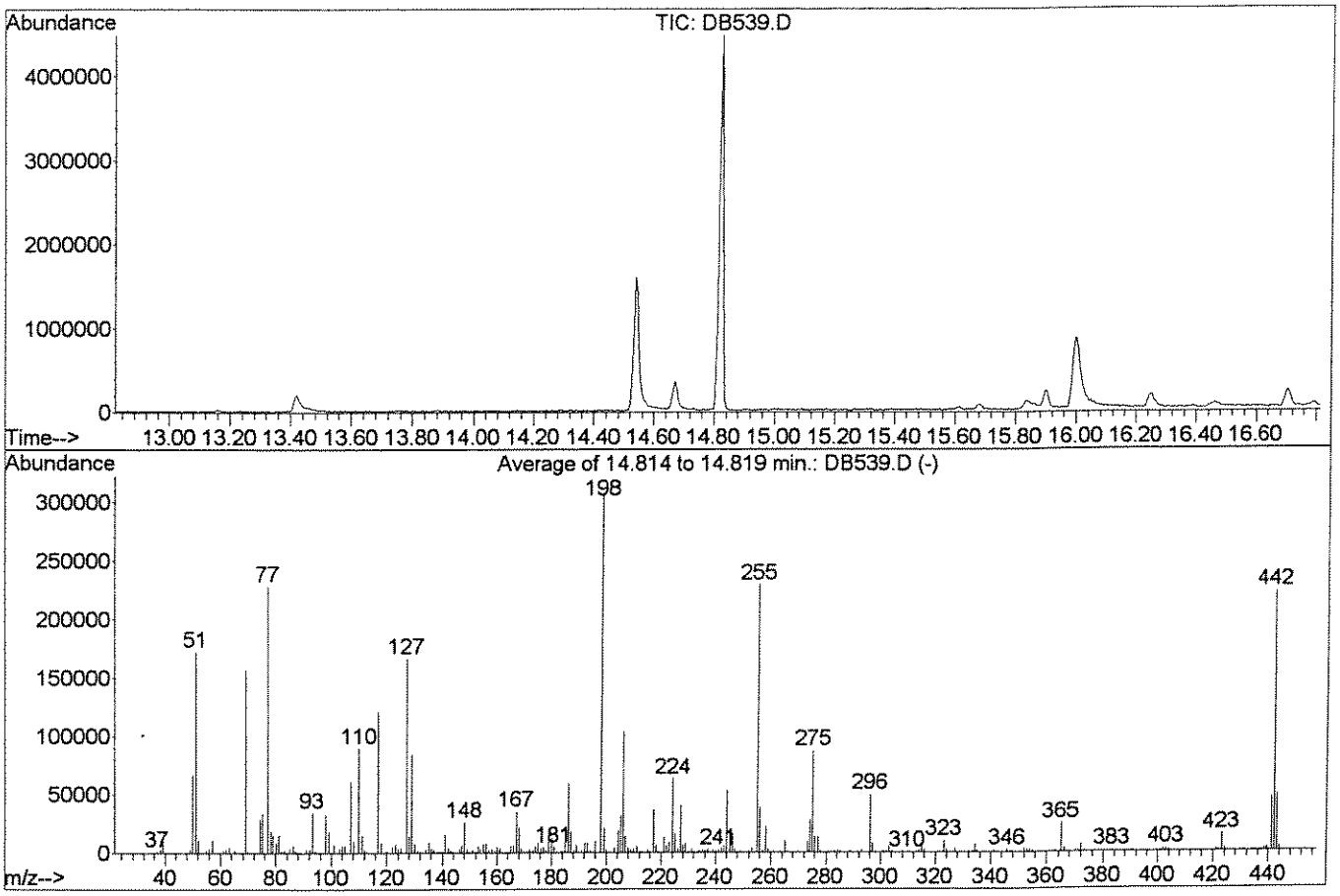
1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	CALIBRATION CHECK	DB540.D	9/9/09	10:42
02	SBLK1	RQ0908092-01|1.0	DB555.D	9/9/09	21:10
03	SBLK1MS	RQ0908092-02|1.0	DB556.D	9/9/09	21:50

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



Spectrum Information: Average of 14.814 to 14.819 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	56.1	172651	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.0	156876	PASS
70	69	0.00	2	0.9	1443	PASS
127	198	40	60	54.1	166303	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	307488	PASS
199	198	5	9	6.6	20342	PASS
275	198	10	30	28.2	86792	PASS
365	198	1	100	7.9	24222	PASS
441	443	0.01	100	95.6	45968	PASS
442	198	40	100	72.2	221888	PASS
443	442	17	23	21.7	48092	PASS

DB539.D DFTPPLVI.M Wed Sep 09 10:38:32 2009

TW

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: SDG No.: SA64-10BSPLP2

Lab File ID: DB569.D DFTPP Injection Date: 9/10/09

Instrument ID: 5973-B DFTPP Injection Time: 12:21

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	45.9
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	49.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	29.9
365	Greater than 1.0% of mass 198	9.1
441	Present, but less than mass 443	16.9
442	40.0 - 100.0% of mass 198	88.2
443	17.0 - 23.0% of mass 442	17.6 (20.0)2

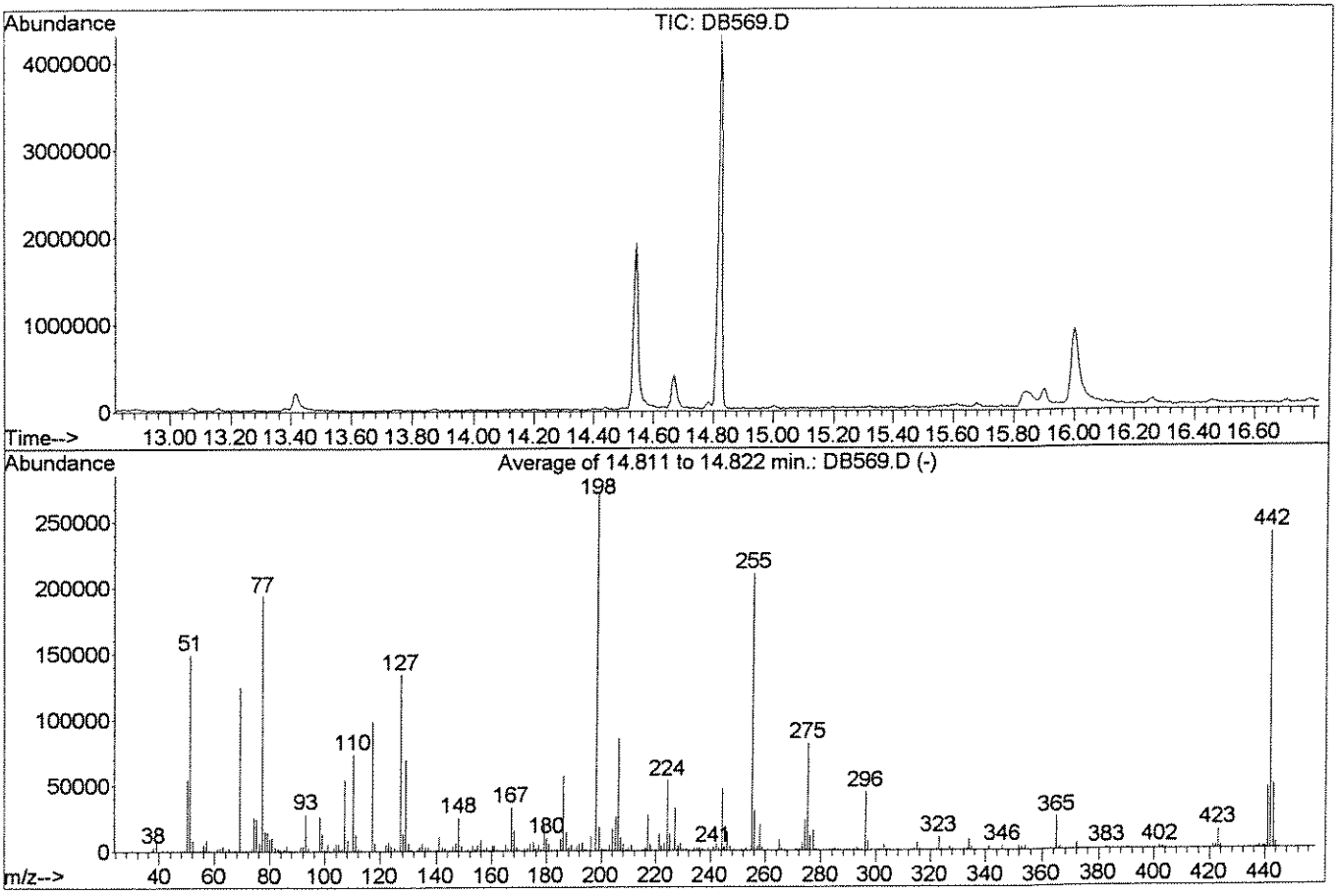
1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD220	CALIBRATION CHECK	DB570.D	9/10/09	12:56
02	SBLK1MSD	RQ0908092-03|1.0	DB571.D	9/10/09	13:38
03	SA64-10BSPLP2	R0904817-001|1.0	DB572.D	9/10/09	14:18
04	SA64-10BSPLP3	R0904817-002|1.0	DB573.D	9/10/09	14:59
05	SA64-10BSPLP2 Re	R0904817-001|1.0	DB586.D	9/10/09	15:39
06	SA64-10BSPLP3 Re	R0904817-002|1.0	DB585.D	9/10/09	16:20
07	EQBLK1	RQ0908042-01|1.0	DB574.D	9/10/09	17:01
08	EQBLK2	RQ0908043-01|1.0	DB575.D	9/10/09	17:43

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D Vial: 1
Acq On : 10 Sep 2009 12:21 pm Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



AutoFind: Scans 1165, 1166, 1167; Background Corrected with Scan 1161

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.8	149184	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.9	124906	PASS
70	69	0.00	2	0.4	499	PASS
127	198	40	60	49.3	134235	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	272124	PASS
199	198	5	9	6.6	17893	PASS
275	198	10	30	29.9	81230	PASS
365	198	1	100	9.1	24638	PASS
441	443	0.01	100	96.2	46123	PASS
442	198	40	100	88.2	240080	PASS
443	442	17	23	20.0	47927	PASS

DB569.D DFTPPLVI.M Thu Sep 10 16:26:59 2009 JW

00159

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: SDG No.: SA64-10B SP P2

Lab File ID (Standard): DB540.D Date Analyzed: 9/9/09

Instrument ID: 5973-B Time Analyzed: 10:42

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	46549	10.82	188919	12.09	107400	13.71
	UPPER LIMIT	93098	11.32	377838	12.59	214800	14.21
	LOWER LIMIT	23275	10.32	94460	11.59	53700	13.21
	EPA SAMPLE NO.						
01	SBLK1	51647	10.83	192142	12.10	101572	13.71
02	SBLK1MS	38510	10.82	170303	12.09	102287	13.71

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (NPT) = d8-Naphthalene
IS3 (ANT) = d10-Acenaphthene
IS4 (PHN) = d10-Phenanthrene
IS5 (CRY) = d12-Chrysene
IS6 (PRY) = d12-Perylene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: _____ SDG No.: SA64-10B sdp2

Lab File ID (Standard): DB540.D Date Analyzed: 09/09/09

Instrument ID: 5973-B Time Analyzed: 10:42

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	187946	14.94	205373	18.38	153205	22.43
	UPPER LIMIT	375892	14.44	410746	17.88	306410	21.93
	LOWER LIMIT	93973	15.44	102687	18.88	76603	22.93
	EPA SAMPLE NO.						
01	SBLK1	159217	14.93	185249	18.39	120330	22.43
02	SBLK1MS	160361	14.93	170932	18.39	134523	22.43

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (NPT) = d8-Naphthalene
IS3 (ANT) = d10-Acenaphthene
IS4 (PHN) = d10-Phenanthrene
IS5 (CRY) = d12-Chrysene
IS6 (PRY) = d12-Perylene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: SDG No.: SA64-10B SPLP2

Lab File ID (Standard): DB570.D Date Analyzed: 9/10/09

Instrument ID: 5973-B Time Analyzed: 12:56

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	41410	10.82	166566	12.09	85700	13.71
	UPPER LIMIT	82820	11.32	333132	12.59	171400	14.21
	LOWER LIMIT	20705	10.32	83283	11.59	42850	13.21
	EPA SAMPLE NO.						
01	SBLK1MSD	38619	10.82	143006	12.09	87637	13.71
02	SA64-10BSPLP2	40672	10.82	146459	12.09	78204	13.71
03	SA64-10BSPLP3	42193	10.83	165052	12.10	40734 *	13.71
04	SA64-10BSPLP2 RE	41194	10.82	149941	12.09	77811	13.71
05	SA64-10BSPLP3 RE	41292	10.82	164971	12.09	17045 *	13.71
06	EQBLK1	44419	10.82	159382	12.09	88879	13.71
07	EQBLK2	39806	10.83	153052	12.09	78076	13.71

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (NPT) = d8-Naphthalene
IS3 (ANT) = d10-Acenaphthene
IS4 (PHN) = d10-Phenanthrene
IS5 (CRY) = d12-Chrysene
IS6 (PRY) = d12-Perylene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROCH Contract: Northgate

Lab Code: 10145 Case No.: R904817 SAS No.: SDG No.: SA64-10B spl p2

Lab File ID (Standard): DB570.D Date Analyzed: 09/10/09

Instrument ID: 5973-B Time Analyzed: 12:56

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	178591	14.93	192301	18.38	150666	22.43
	UPPER LIMIT	357182	14.43	384602	17.88	301332	21.93
	LOWER LIMIT	89296	15.43	96151	18.88	75333	22.93
	EPA SAMPLE NO.						
01	SBLK1MSD	165291	14.93	187957	18.38	140467	22.41
02	SA64-10BSPL p2	152365	14.93	164939	18.38	307 *	22.49
03	SA64-10BSPL p3	167709	14.93	194176	18.38	437 *	22.57
04	SA64-10BSPL p2 re	154206	14.93	171334	18.38	236 *	22.66
05	SA64-10BSPL p3 re	169710	14.93	194339	18.38	291 *	22.28
06	EQBLK1	167339	14.93	193592	18.38	125622	22.42
07	EQBLK2	154181	14.93	172790	18.38	123667	22.42

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (NPT) = d8-Naphthalene
IS3 (ANT) = d10-Acenaphthene
IS4 (PHN) = d10-Phenanthrene
IS5 (CRY) = d12-Chrysene
IS6 (PRY) = d12-Perylene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

SEMIVOLATILE ORGANICS

SAMPLE DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 15:39	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 15:39	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 15:39	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 15:39	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 15:39	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 15:39	95122	169951	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/10/09 15:39	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 15:39	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 15:39	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 15:39	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 15:39	95122	169951	
Diethyl Phthalate	**0.29**	J	5.0	0.20	1	9/ 2/09	9/10/09 15:39	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 15:39	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 15:39	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 15:39	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 15:39	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 15:39	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 15:39	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 15:39	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 15:39	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 15:39	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 15:39	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 15:39	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 15:39	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	86	45-135	9/10/09 15:39		
Nitrobenzene-d5	88	45-135	9/10/09 15:39		
p-Terphenyl-d14	87	45-135	9/10/09 15:39		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB572.D Vial: 3
Acq On : 10 Sep 2009 2:18 pm Operator: J.Wu
Sample : R0904817-001|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 14:59 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	40672	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	146459	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	78204	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	152365	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	164939	1.00	ppm	0.00
33) d12-Perylene	22.49	264	307	1.00	ppm	0.06
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	109682	1.85	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 92.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	180705	1.71	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 85.50%			
28) SURR6,TERPHENYL-D14	16.59	244	258512	1.89	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 94.50%			
Target Compounds						Qvalue
17) Diethylphthalate	14.01	149	36389	0.29	ppm	94

(#) = qualifier out of range (m) = manual integration
DB572.D LVI0819.M Thu Sep 10 15:00:10 2009 Page 1

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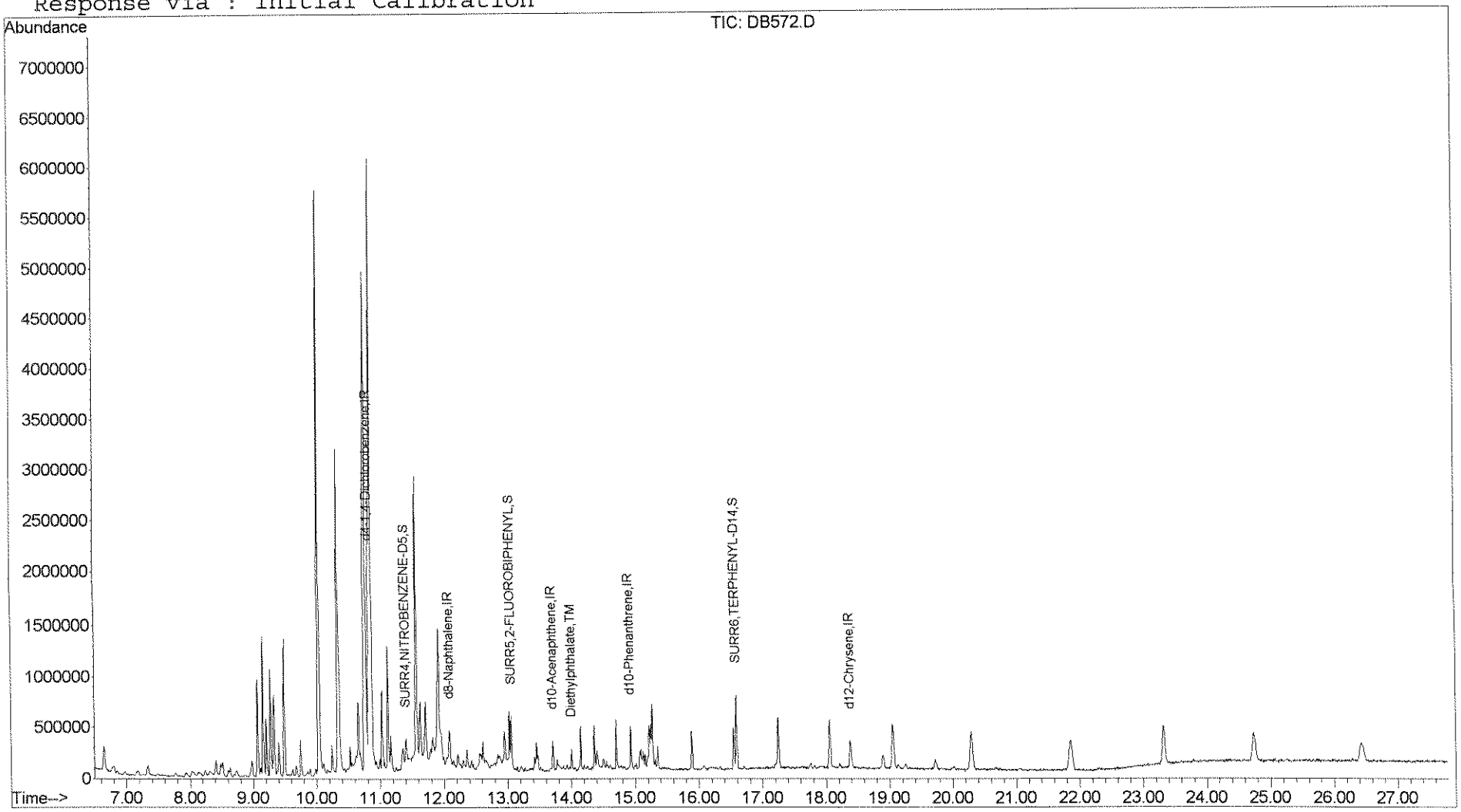
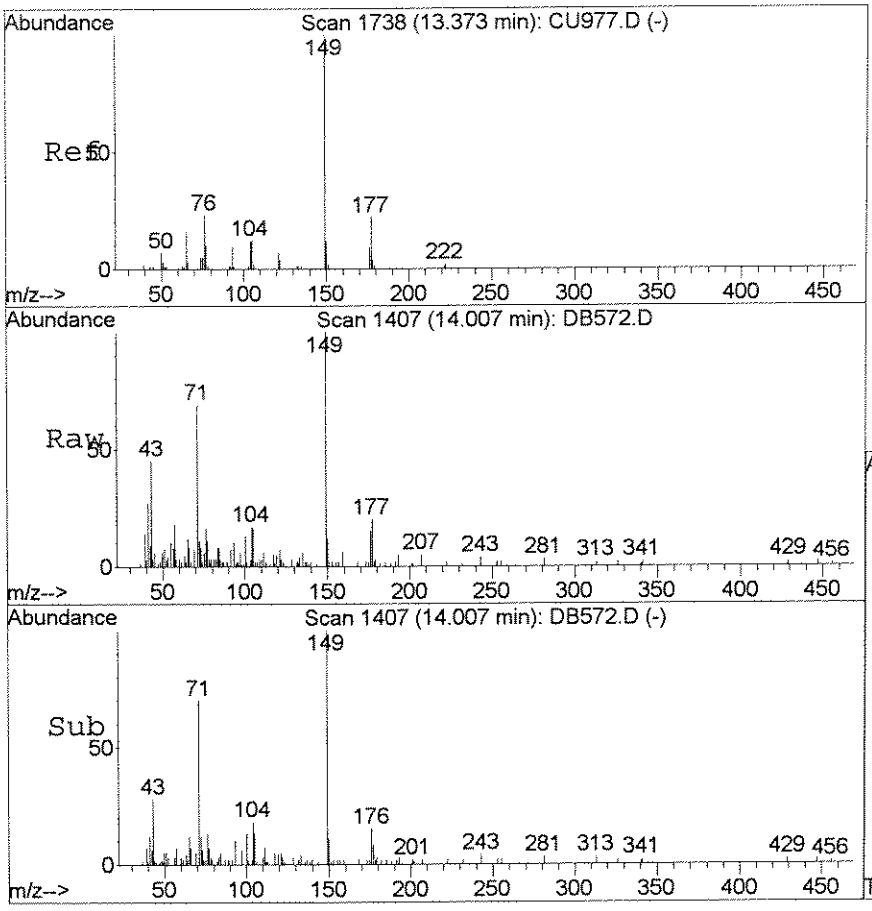
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB572.D Vial: 3
Acq On : 10 Sep 2009 2:18 pm Operator: J.Wu
Sample : R0904817-001|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 14:59 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

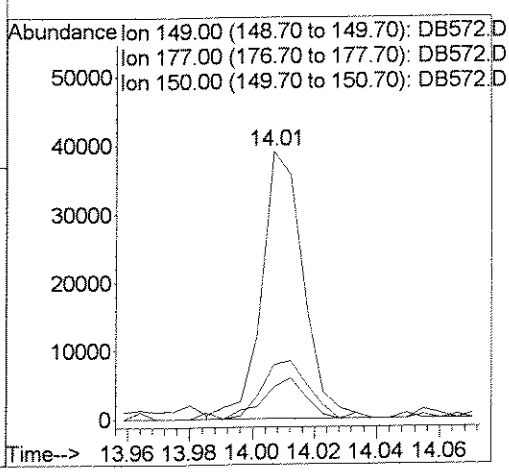




#17
Diethylphthalate
Concen: 0.29 ppm
RT: 14.01 min Scan# 1407
Delta R.T. -0.01 min
Lab File: DB572.D
Acq: 10 Sep 2009 2:18 pm

Tgt Ion:149 Resp: 36389

Ion	Ratio	Lower	Upper
149	100		
177	19.0	16.1	29.9
150	12.0	8.8	16.4



Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001
Run Type: Reanalysis

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 14:18	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 14:18	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 14:18	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 14:18	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:18	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 14:18	95122	169951	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/10/09 14:18	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:18	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 14:18	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 14:18	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:18	95122	169951	
Diethyl Phthalate	**0.27**	J	5.0	0.20	1	9/ 2/09	9/10/09 14:18	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 14:18	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 14:18	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 14:18	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 14:18	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 14:18	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 14:18	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:18	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 14:18	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:18	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 14:18	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 14:18	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 14:18	95122	169951	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
Sample Name:	SA64-10BSPLP2	**Units:**	µg/L
Lab Code:	R0904817-001	**Basis:**	NA
Run Type:	Reanalysis		

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	86	45-135	9/10/09 14:18		
Nitrobenzene-d5	93	45-135	9/10/09 14:18		
p-Terphenyl-d14	95	45-135	9/10/09 14:18		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB586.D Vial: 3
Acq On : 10 Sep 2009 3:39 pm Operator: J.Wu
Sample : R0904817-001|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Re Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:09 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	41194	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	149941	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	77811	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	154206	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	171334	1.00	ppm	0.00
33) d12-Perylene	22.66	264	236	1.00	ppm	0.23
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.40	82	106177	1.75	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 87.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	181570	1.72	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 86.00%			
28) SURR6,TERPHENYL-D14	16.59	244	247496	1.74	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 87.00%			
Target Compounds						Qvalue
17) Diethylphthalate	14.01	149	38057m	0.31	ppm	

(#) = qualifier out of range (m) = manual integration
DB586.D LVI0819.M Thu Sep 10 16:10:07 2009 Page 1

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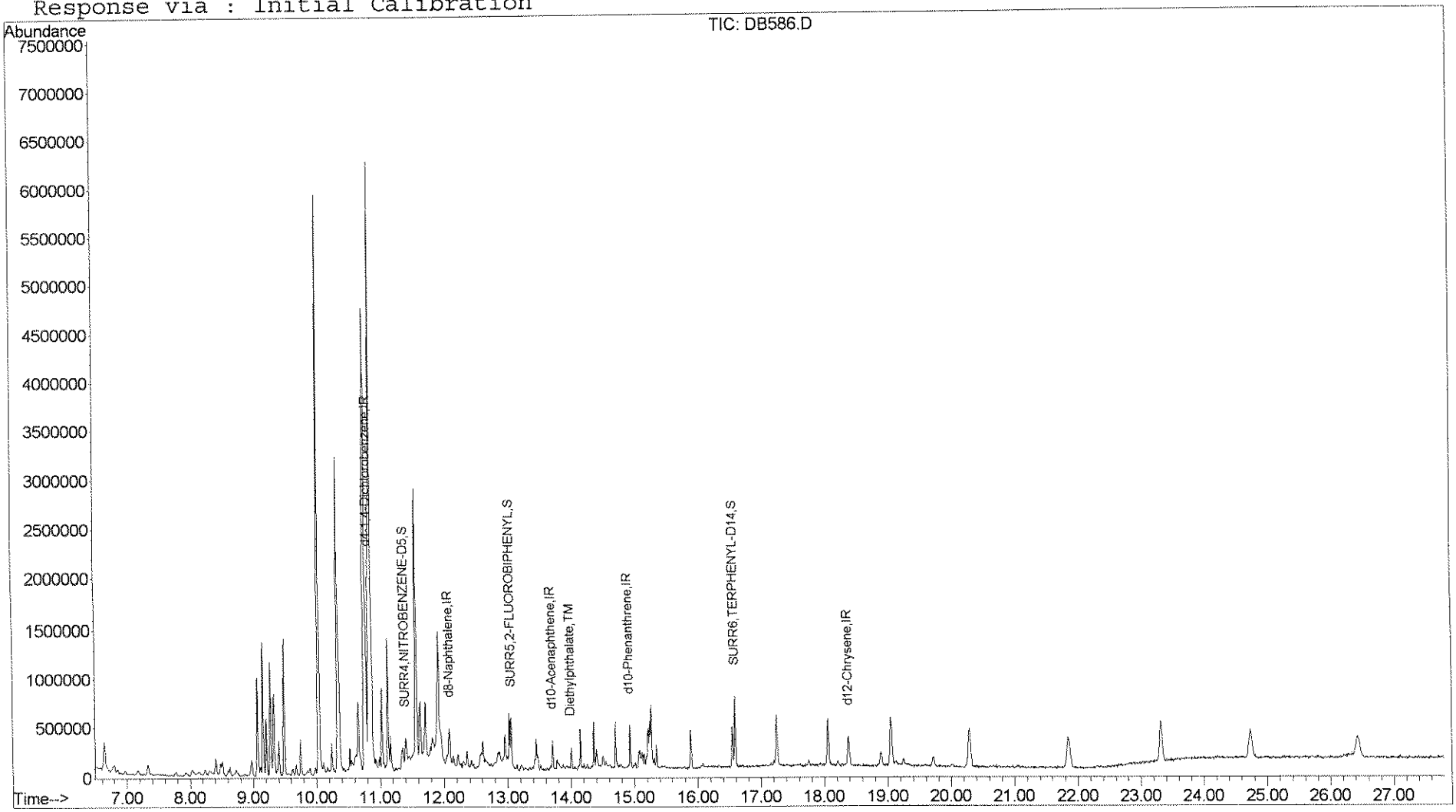
Quantitation Report

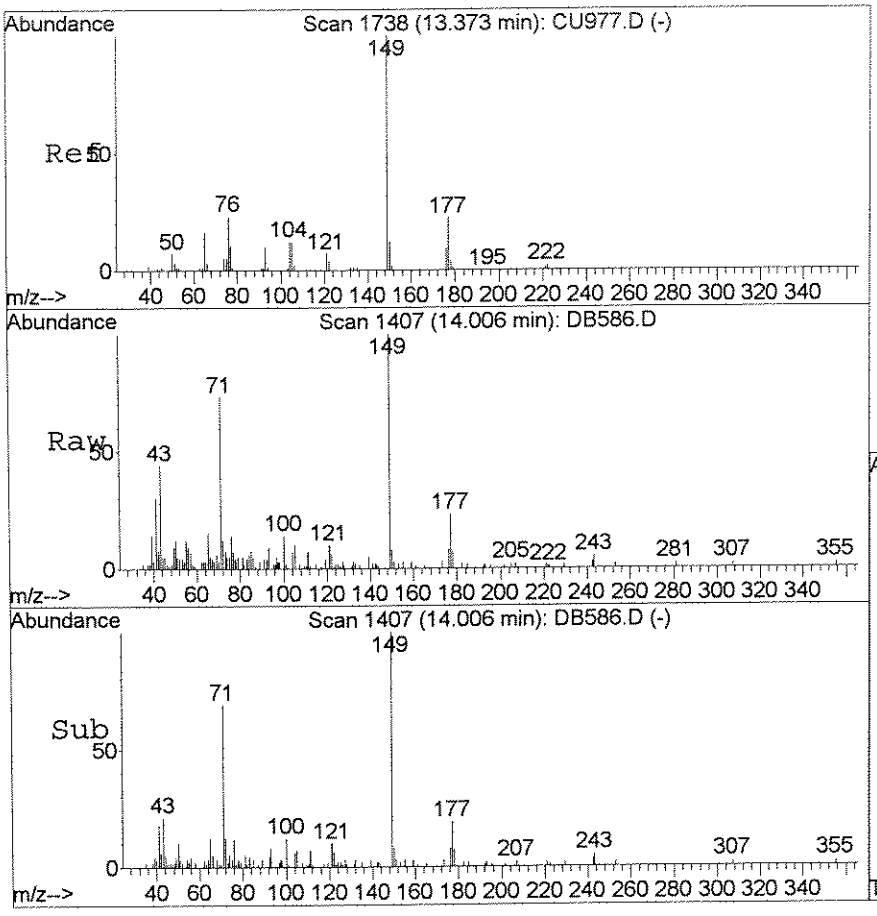
Data File : J:\ACQUDATA\5973B\DATA\091009\DB586.D
Acq On : 10 Sep 2009 3:39 pm
Sample : R0904817-001|1.0
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Re
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:09 2009

Vial: 3
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

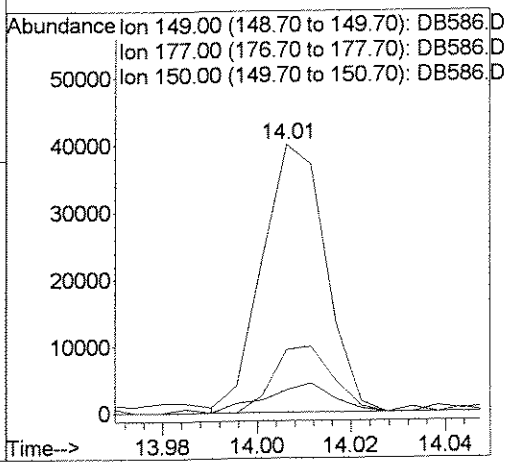




#17
Diethylphthalate
Concen: 0.31 ppm m
RT: 14.01 min Scan# 1407
Delta R.T. -0.01 min
Lab File: DB586.D
Acq: 10 Sep 2009 3:39 pm

Tgt Ion:149 Resp: 38057

Ion	Ratio	Lower	Upper
149	100		
177	23.4	16.1	29.9
150	8.4	8.8	16.4#

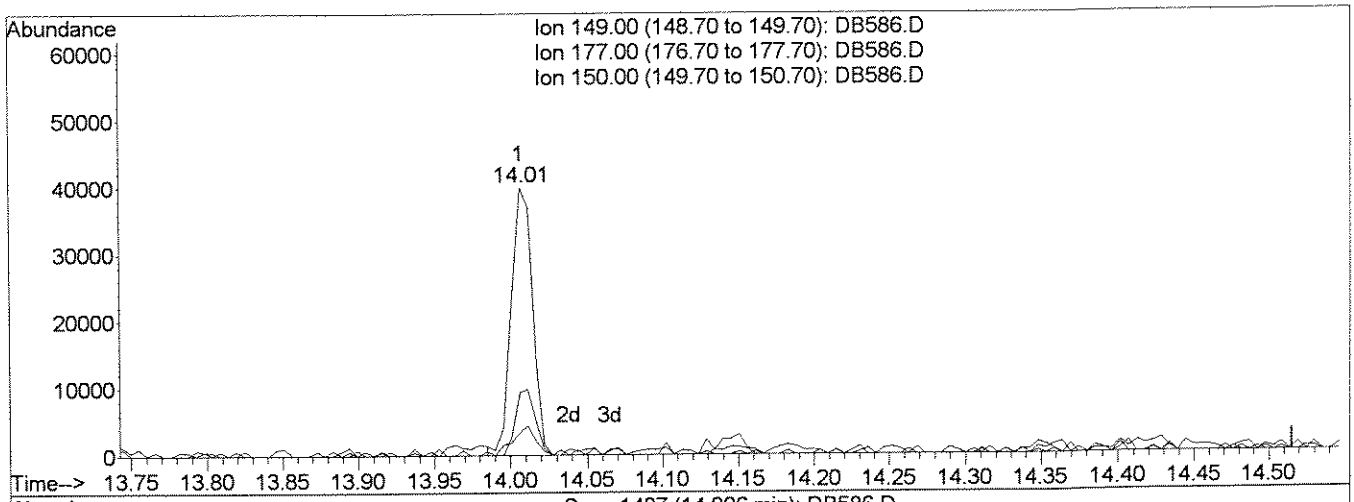


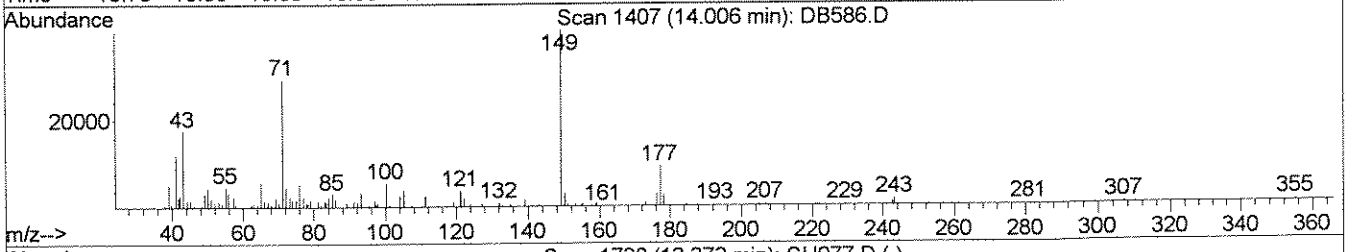
Quantitation Report (Qedit)

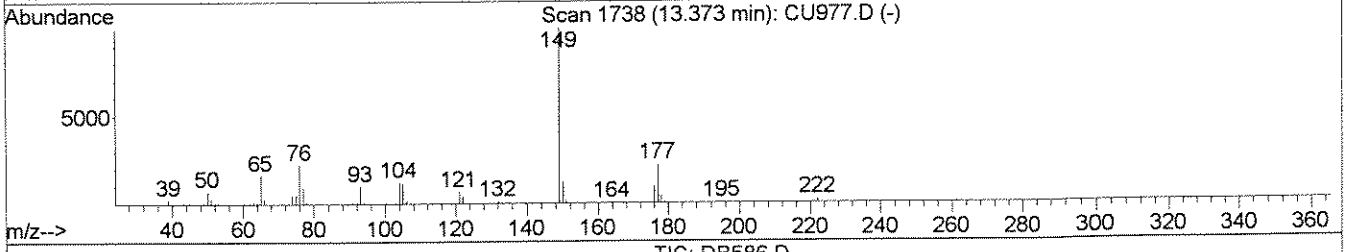
Data File : J:\ACQUDATA\5973B\DATA\091009\DB586.D
Acq On : 10 Sep 2009 3:39 pm
Sample : R0904817-001|1.0
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Re
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:08 2009

Vial: 3
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration







TIC: DB586.D

(17) Diethylphthalate (TM)

14.01min 0.31ppm

response 38291

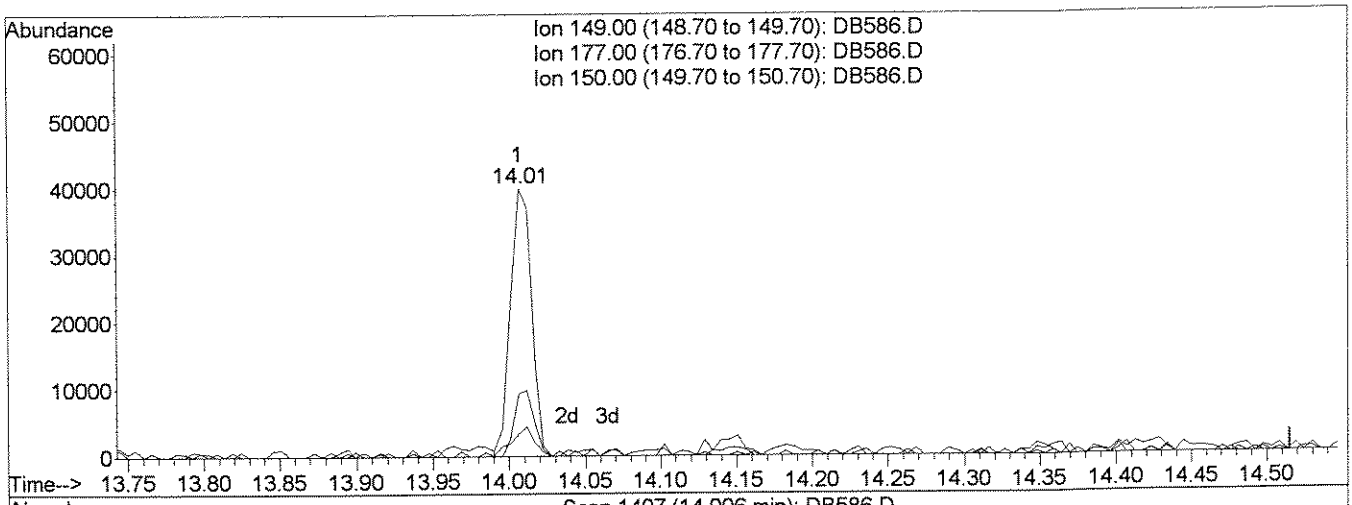
Ion	Exp%	Act%
149.00	100	100
177.00	23.00	22.05
150.00	12.60	8.57#
0.00	0.00	0.00

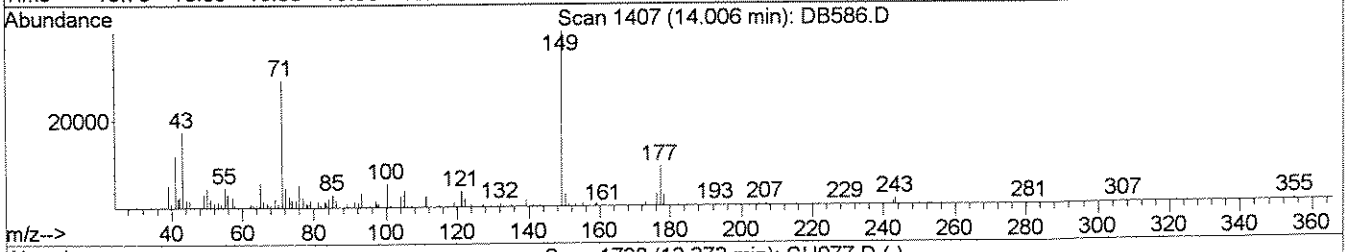
B

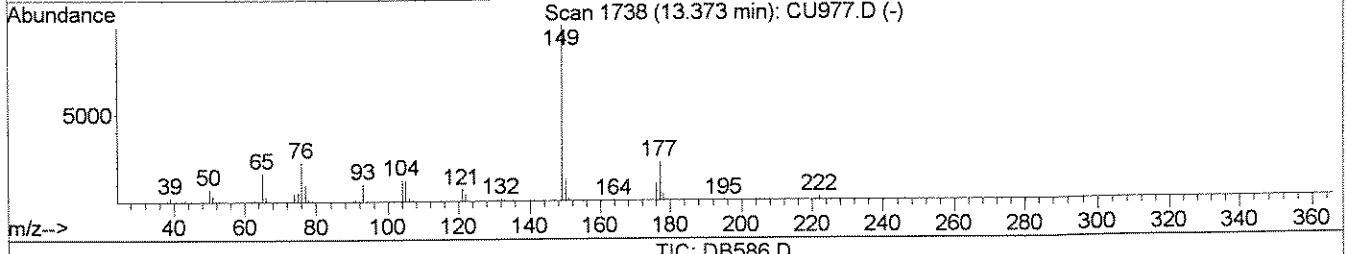
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB586.D Vial: 3
Acq On : 10 Sep 2009 3:39 pm Operator: J.Wu
Sample : R0904817-001|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Re Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:08 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration







TIC: DB586.D

(17) Diethylphthalate (TM)

14.01min 0.31ppm m

response 38057

Ion	Exp%	Act%
149.00	100	100
177.00	23.00	23.41
150.00	12.60	8.42#
0.00	0.00	0.00

A JW 9/10/09

9/11

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 16:20	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 16:20	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 16:20	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 16:20	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 16:20	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 16:20	95122	169951	
Butyl Benzyl Phthalate	**0.11**	BJ	5.0	0.11	1	9/ 2/09	9/10/09 16:20	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 16:20	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 16:20	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 16:20	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 16:20	95122	169951	
Diethyl Phthalate	**1.3**	J	5.0	0.20	1	9/ 2/09	9/10/09 16:20	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 16:20	95122	169951	
Fluoranthene	**0.057**	J	0.20	0.040	1	9/ 2/09	9/10/09 16:20	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 16:20	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 16:20	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 16:20	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 16:20	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 16:20	95122	169951	
Phenanthrene	**0.075**	J	0.20	0.062	1	9/ 2/09	9/10/09 16:20	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 16:20	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 16:20	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 16:20	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 16:20	95122	169951	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	8/24/09 0834
Sample Matrix:	Soil	**Date Received:**	8/25/09
		Pre-Prep Date:	8/31/09
Sample Name:	SA64-10BSPLP3	**Units:**	µg/L
Lab Code:	R0904817-002	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec		Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	449	*	45-135	9/10/09 16:20		
Nitrobenzene-d5	91		45-135	9/10/09 16:20		
p-Terphenyl-d14	91		45-135	9/10/09 16:20		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB585.D Vial: 4
Acq On : 10 Sep 2009 4:20 pm Operator: J.Wu
Sample : R0904817-002|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP (Re) Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:38 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	41292	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	164971	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	17045 ↓	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	169710	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	194339	1.00	ppm	0.00
33) d12-Perylene	22.28	264	291 ↓	1.00	ppm	-0.15
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.40	82	121145	1.81	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 90.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	207514	8.98	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 449.00%# ↑			
28) SURR6,TERPHENYL-D14	16.59	244	293810	1.82	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 91.00%			
Target Compounds						Qvalue
8) 2-Methylnaphthalene	12.73	142	5925	0.05	ppm	93
17) Diethylphthalate	14.01	149	36089	1.33	ppm	95
20) Phenanthrene	14.95	178	14884	0.08	ppm	93
25) Fluoranthene	16.20	202	12923	0.06	ppm	84
29) Butyl benzyl phthalate	17.22	149	14663	0.12	ppm	95

(#) = qualifier out of range (m) = manual integration
DB585.D LVI0819.M Fri Sep 11 08:40:00 2009 Page 1

00179

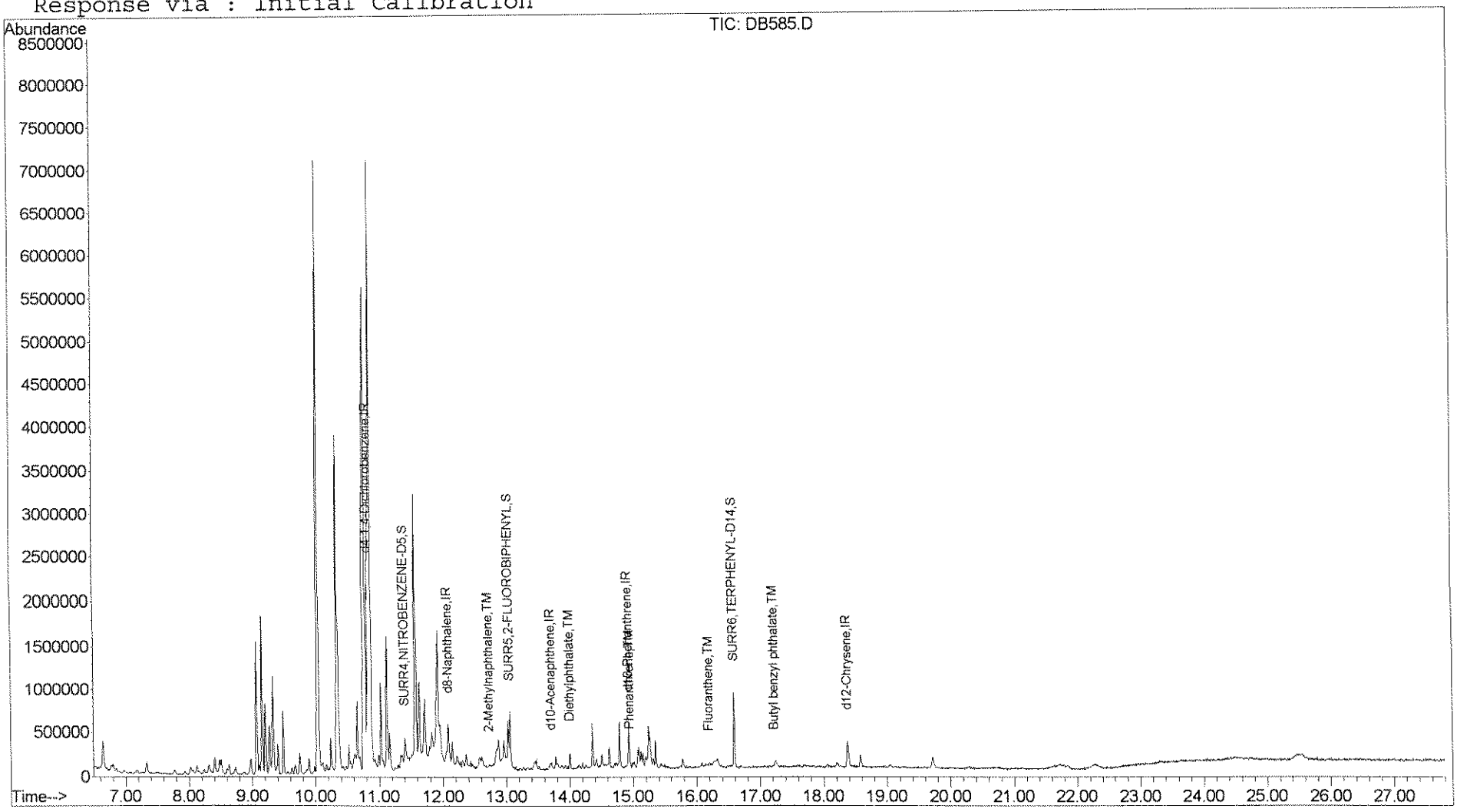
Quantitation Report

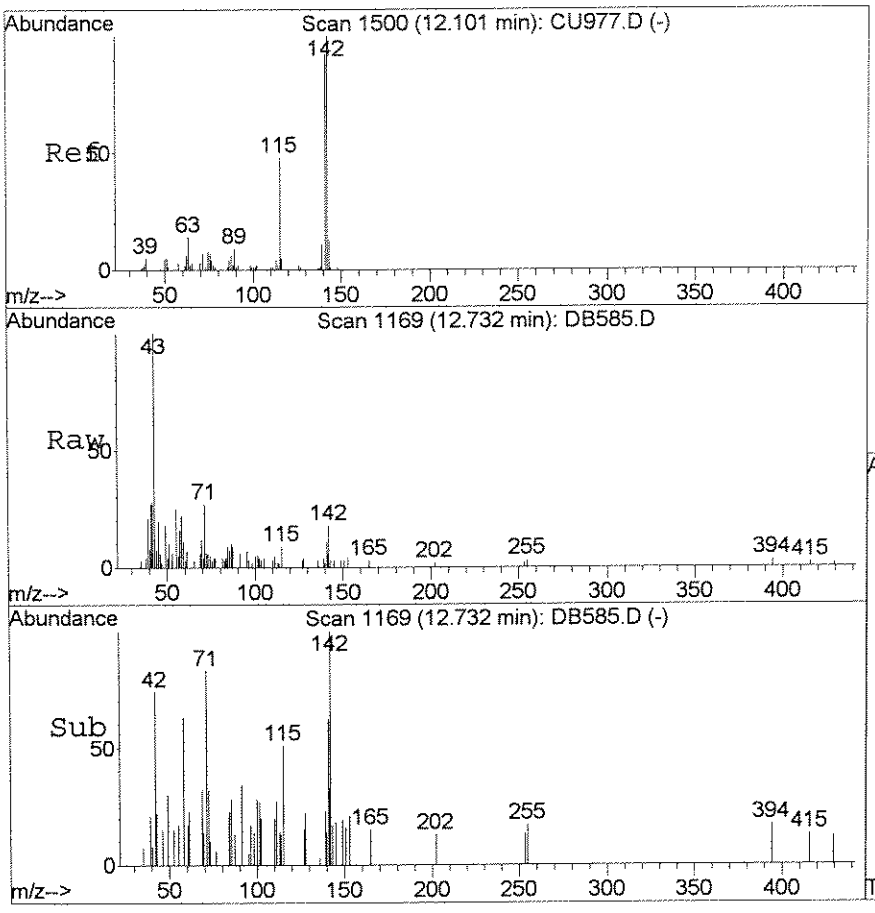
Data File : J:\ACQUDATA\5973B\DATA\091009\DB585.D
Acq On : 10 Sep 2009 4:20 pm
Sample : R0904817-002|1.0
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:38 2009

Vial: 4
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

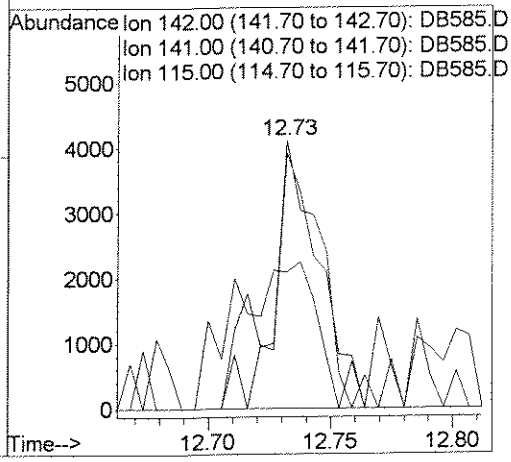


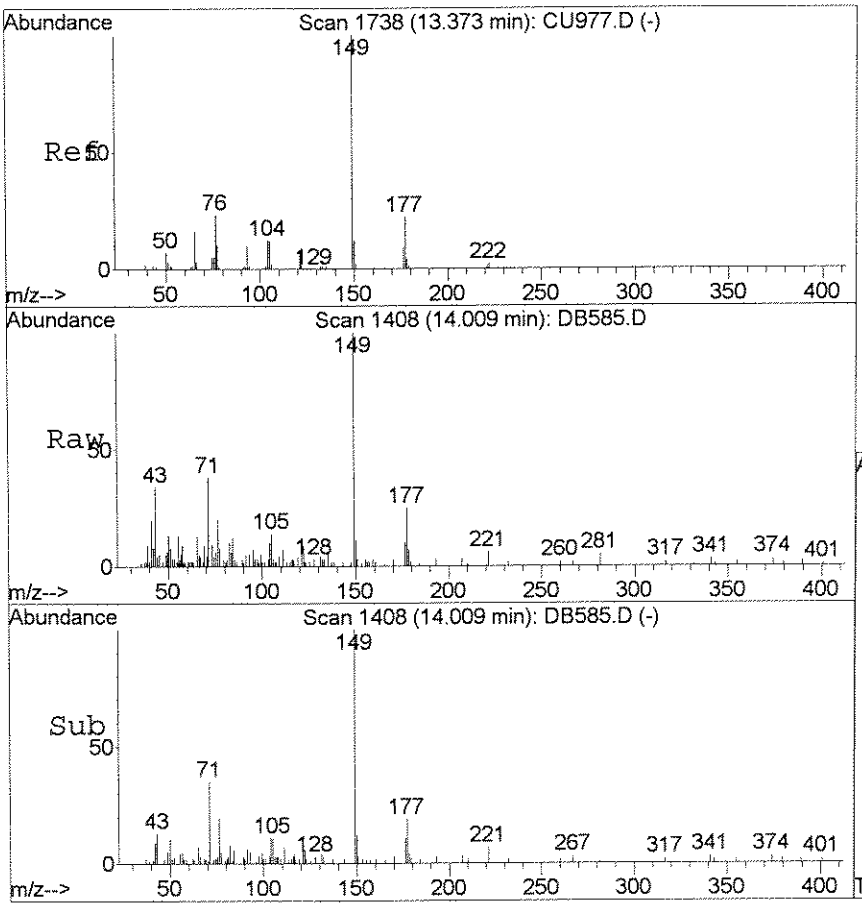


#8
2-Methylnaphthalene
Concen: 0.05 ppm
RT: 12.73 min Scan# 1169
Delta R.T. -0.01 min
Lab File: DB585.D
Acq: 10 Sep 2009 4:20 pm

Tgt Ion:142 Resp: 5925

Ion	Ratio	Lower	Upper
142	100		
141	86.3	66.0	106.0
115	26.6	19.0	59.0

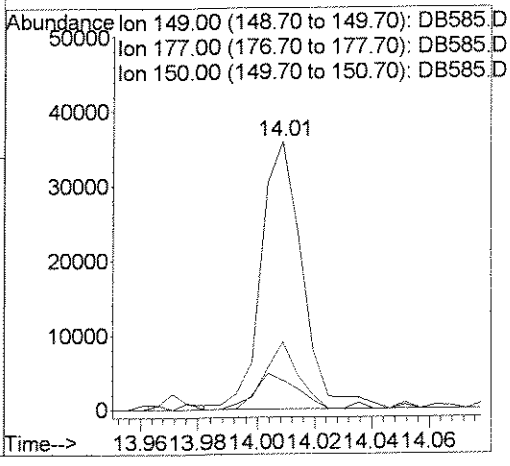


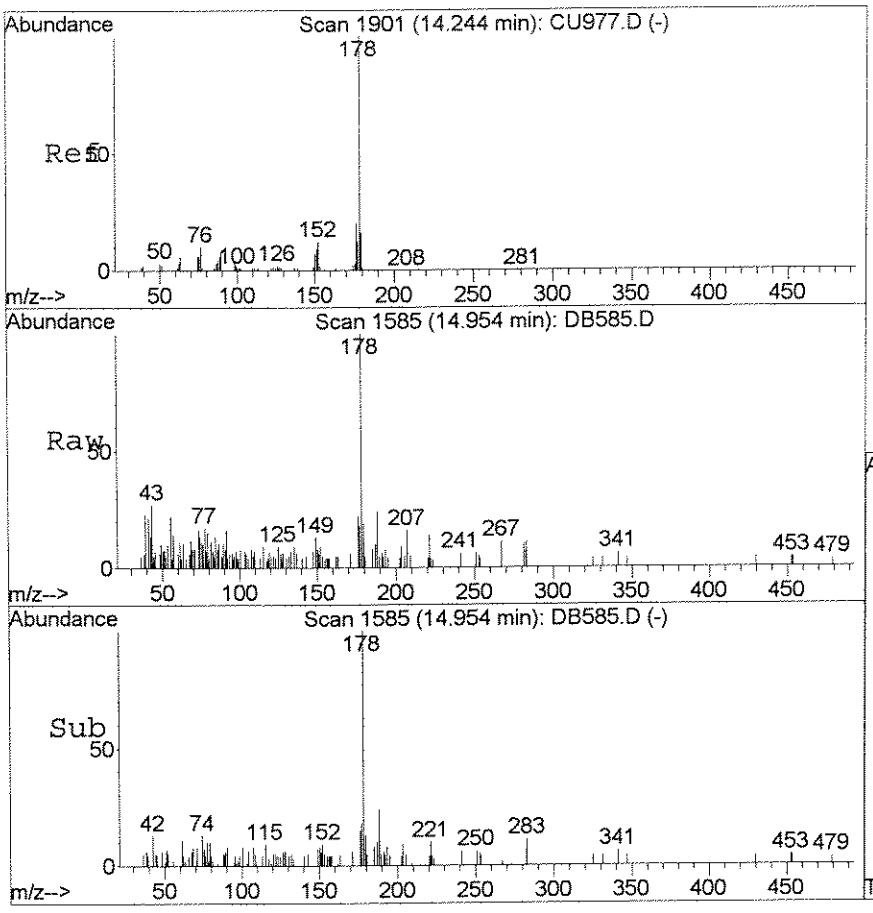


#17
Diethylphthalate
Concen: 1.33 ppm
RT: 14.01 min Scan# 1408
Delta R.T. -0.01 min
Lab File: DB585.D
Acq: 10 Sep 2009 4:20 pm

Tgt Ion:149 Resp: 36089

Ion	Ratio	Lower	Upper
149	100		
177	25.4	16.1	29.9
150	10.9	8.8	16.4

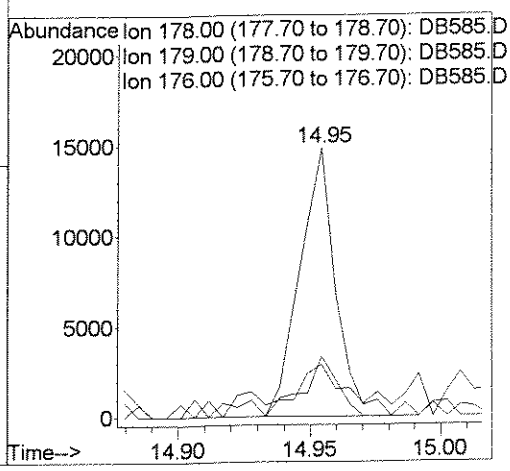


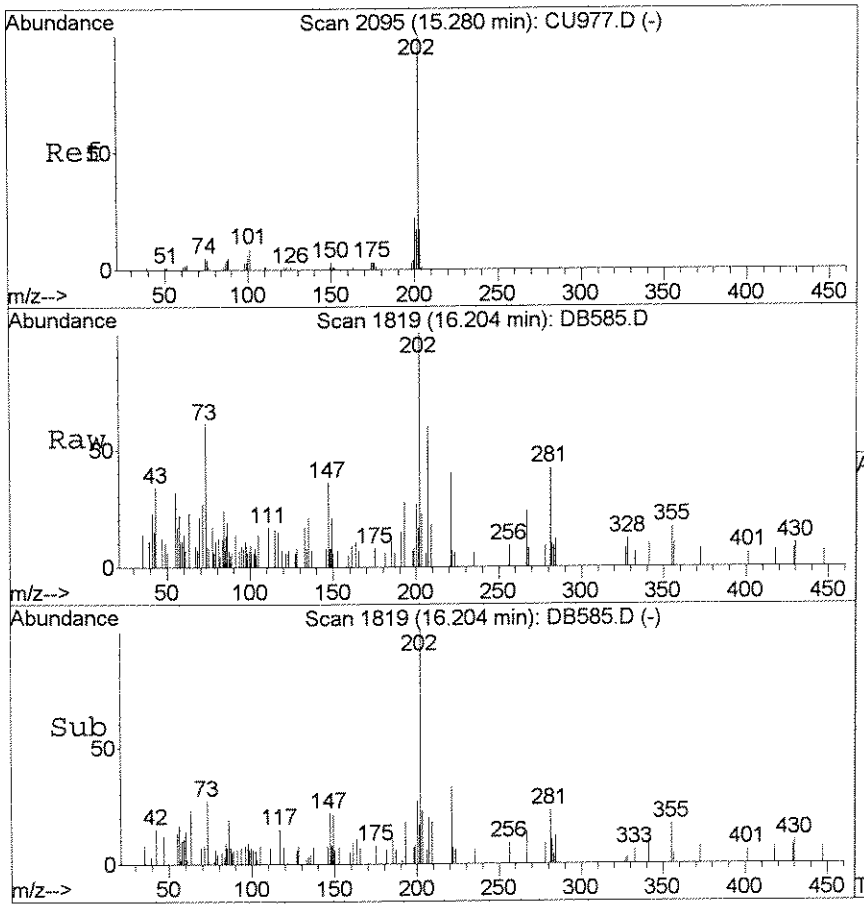


#20
Phenanthrene
Concen: 0.08 ppm
RT: 14.95 min Scan# 1585
Delta R.T. -0.00 min
Lab File: DB585.D
Acq: 10 Sep 2009 4:20 pm

Tgt Ion:178 Resp: 14884

Ion	Ratio	Lower	Upper
178	100		
179	14.2	0.0	45.2
176	22.4	0.0	48.0

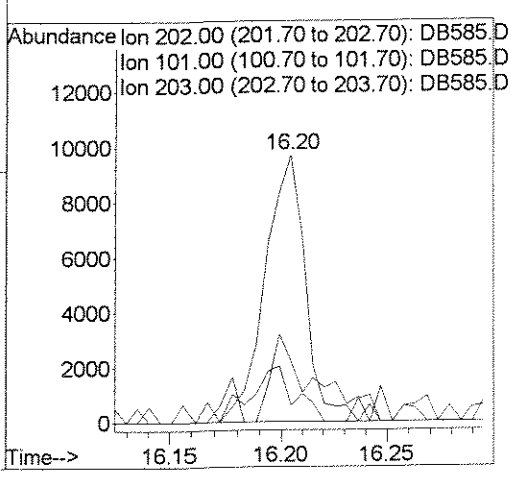


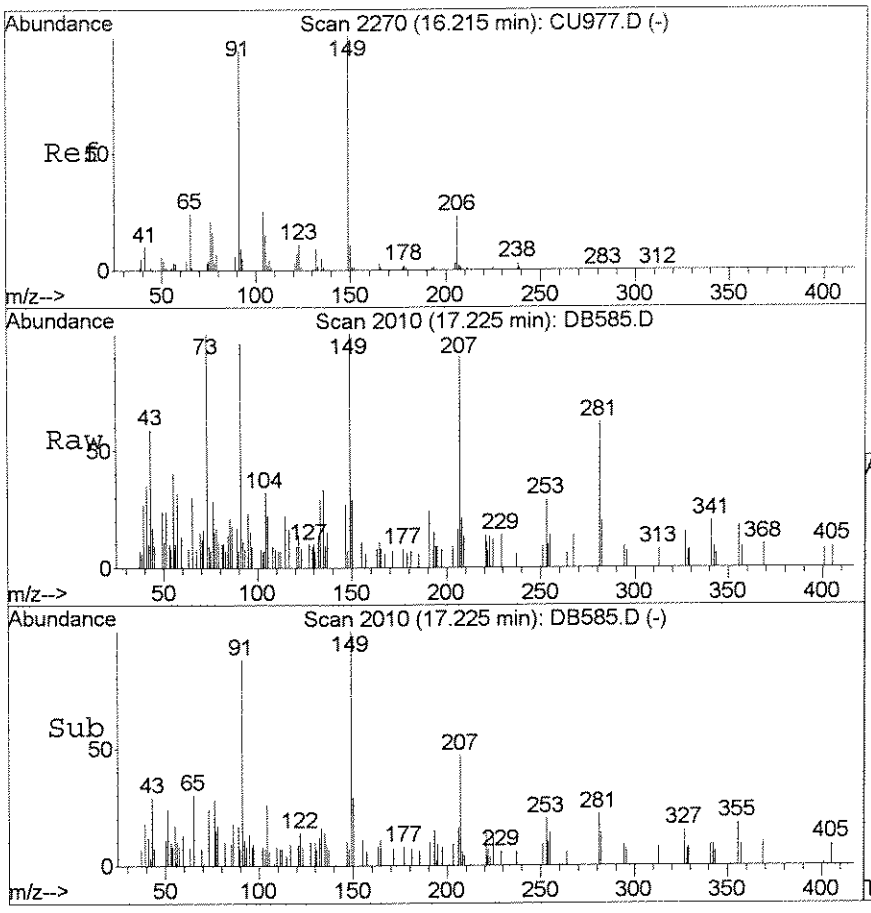


#25
Fluoranthene
Concen: 0.06 ppm
RT: 16.20 min Scan# 1819
Delta R.T. 0.00 min
Lab File: DB585.D
Acq: 10 Sep 2009 4:20 pm

Tgt Ion:202 Resp: 12923

Ion	Ratio	Lower	Upper
202	100		
101	2.4	0.0	41.1
203	22.7	0.0	47.4

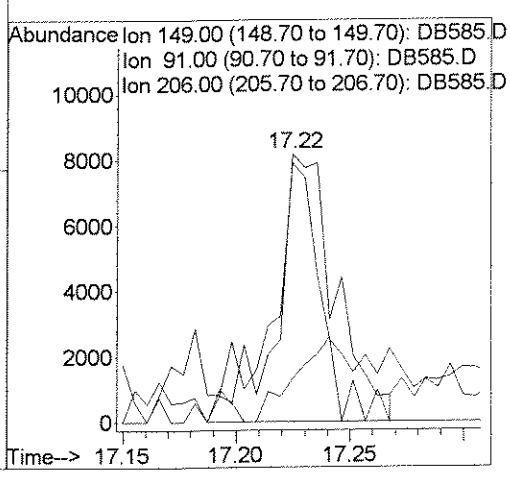




#29
Butyl benzyl phthalate
Concen: 0.12 ppm
RT: 17.22 min Scan# 2010
Delta R.T. -0.02 min
Lab File: DB585.D
Acq: 10 Sep 2009 4:20 pm

Tgt Ion:149 Resp: 14663

Ion	Ratio	Lower	Upper
149	100		
91	82.0	53.5	99.5
206	16.9	12.0	22.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002
Run Type: Reanalysis

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 14:59	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 14:59	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 14:59	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 14:59	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:59	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 14:59	95122	169951	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/10/09 14:59	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:59	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 14:59	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 14:59	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:59	95122	169951	
Diethyl Phthalate	**0.54**	J	5.0	0.20	1	9/ 2/09	9/10/09 14:59	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 14:59	95122	169951	
Fluoranthene	**0.075**	J	0.20	0.040	1	9/ 2/09	9/10/09 14:59	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 14:59	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 14:59	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 14:59	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 14:59	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 14:59	95122	169951	
Phenanthrene	**0.066**	J	0.20	0.062	1	9/ 2/09	9/10/09 14:59	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 14:59	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 14:59	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 14:59	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 14:59	95122	169951	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002
Run Type: Reanalysis

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec		Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	184	*	45-135	9/10/09 14:59		
Nitrobenzene-d5	87		45-135	9/10/09 14:59		
p-Terphenyl-d14	88		45-135	9/10/09 14:59		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB573.D Vial: 4
Acq On : 10 Sep 2009 2:59 pm Operator: J.Wu
Sample : R0904817-002|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 15:56 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

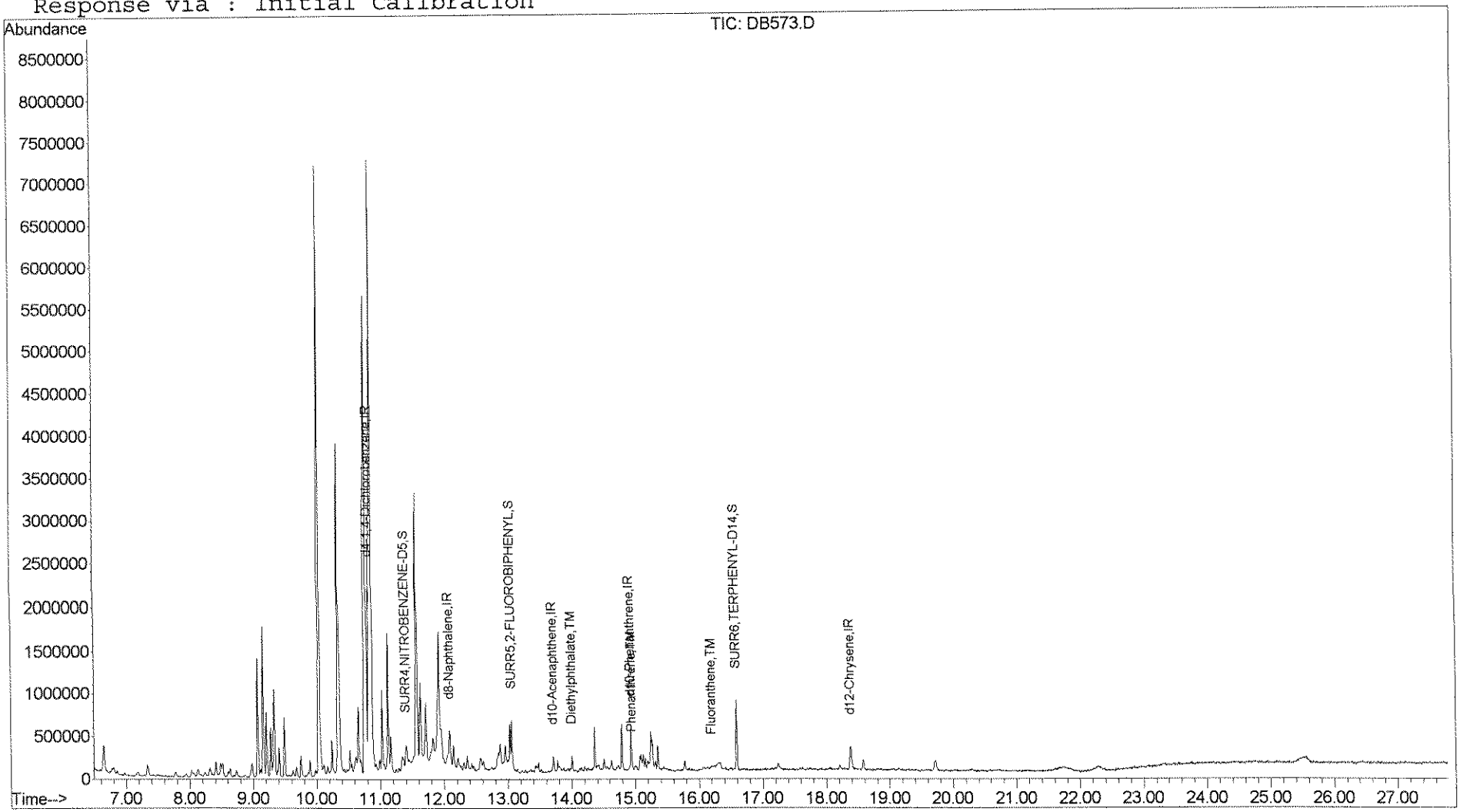
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	42193	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	165052	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	40734	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	167709	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	194176	1.00	ppm	0.00
33) d12-Perylene	22.57	264	437	1.00	ppm	0.14
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	115740	1.73	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 86.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	203108	3.68	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 184.00%#			
28) SURR6,TERPHENYL-D14	16.59	244	281980	1.75	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 87.50%			
Target Compounds						Qvalue
17) Diethylphthalate	14.01	149	37026	0.57	ppm	96
20) Phenanthrene	14.95	178	14436	0.07	ppm	83
25) Fluoranthene	16.20	202	15917	0.08	ppm	83

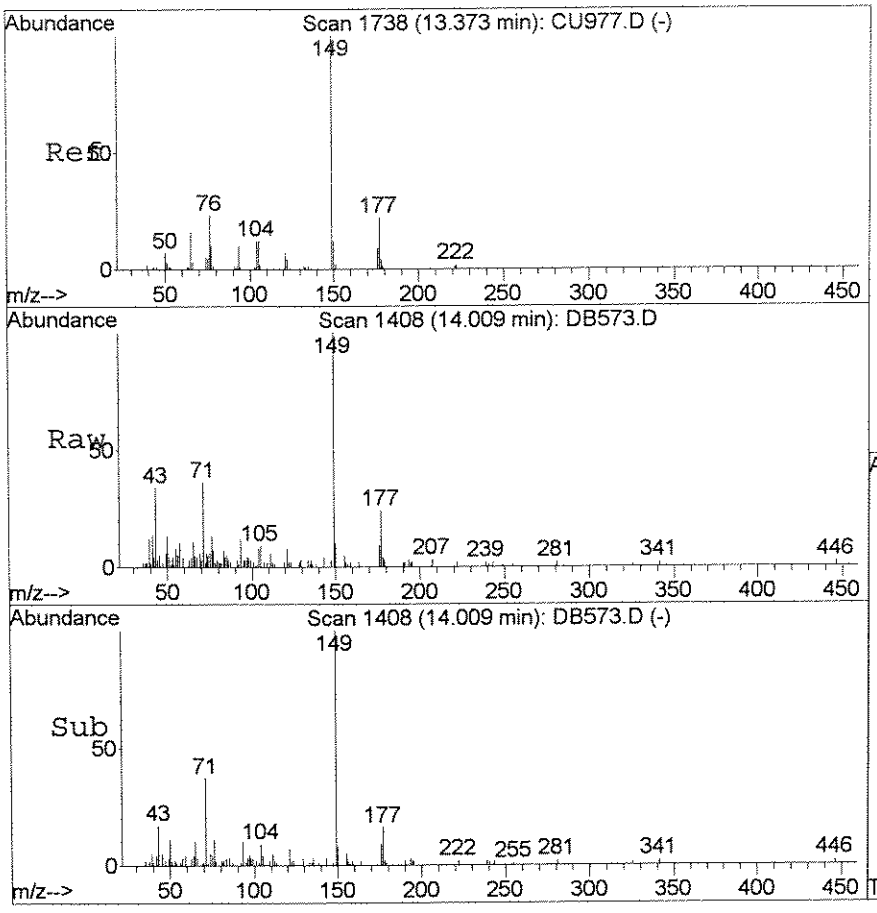
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB573.D Vial: 4
Acq On : 10 Sep 2009 2:59 pm Operator: J.Wu
Sample : R0904817-002|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LLSPLP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 15:56 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

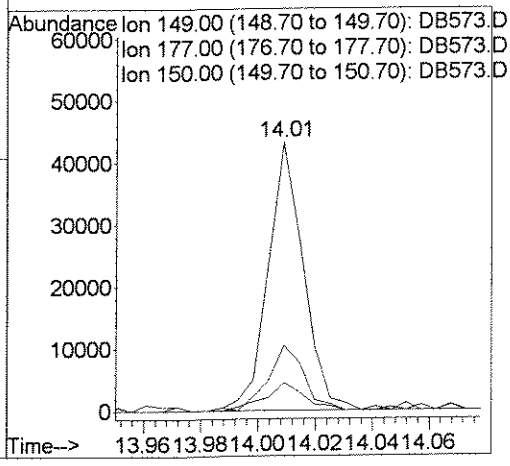


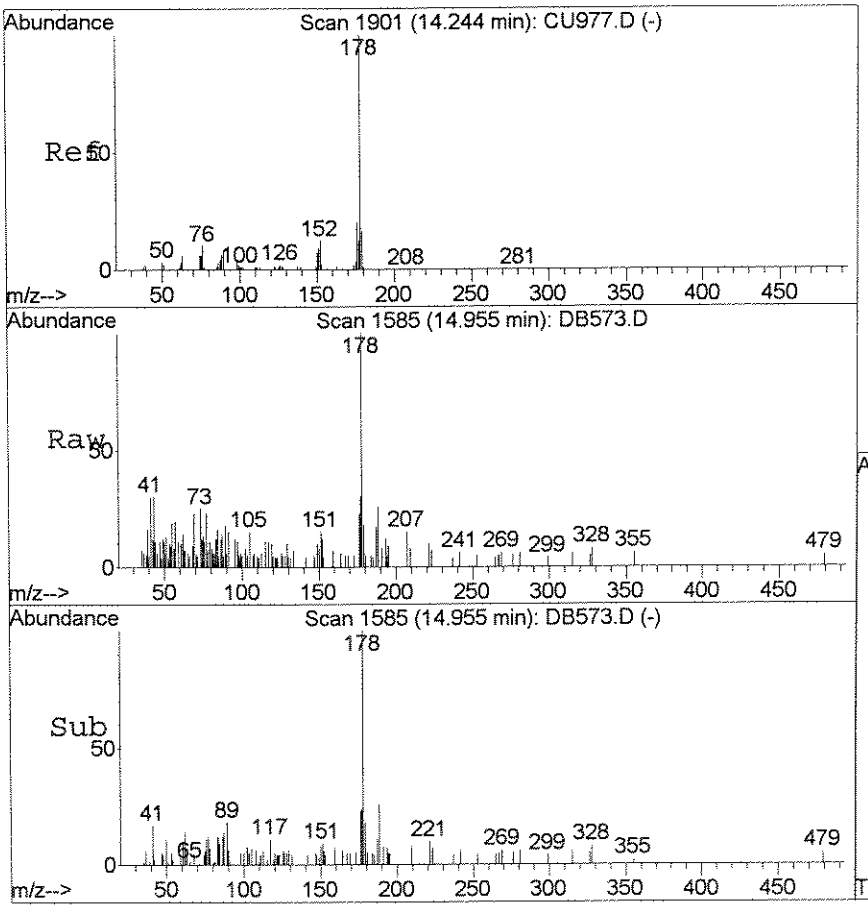


#17
Diethylphthalate
Concen: 0.57 ppm
RT: 14.01 min Scan# 1408
Delta R.T. -0.01 min
Lab File: DB573.D
Acq: 10 Sep 2009 2:59 pm

Tgt Ion:149 Resp: 37026

Ion	Ratio	Lower	Upper
149	100		
177	24.2	16.1	29.9
150	9.7	8.8	16.4

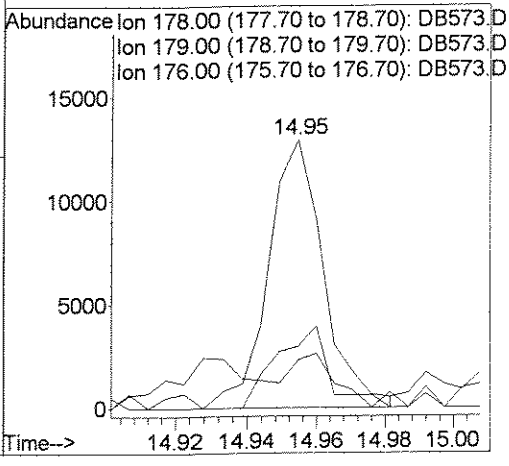


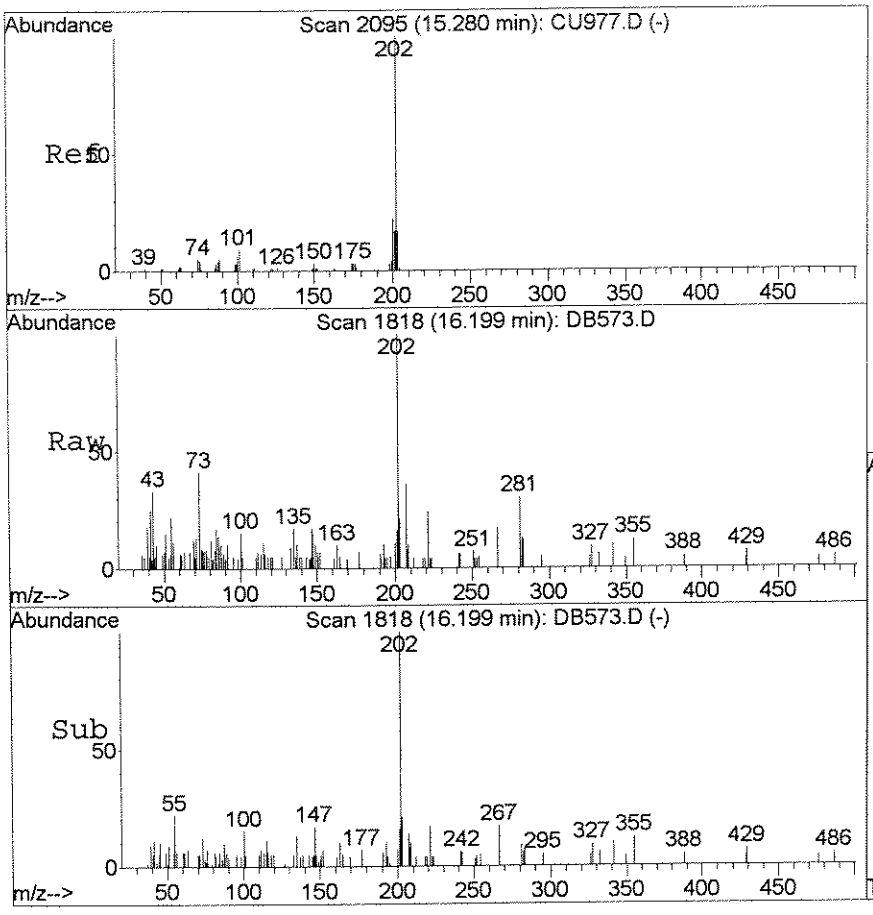


#20
Phenanthrene
Concen: 0.07 ppm
RT: 14.95 min Scan# 1585
Delta R.T. -0.00 min
Lab File: DB573.D
Acq: 10 Sep 2009 2:59 pm

Tgt Ion:178 Resp: 14436

Ion	Ratio	Lower	Upper
178	100		
179	5.8	0.0	45.2
176	23.4	0.0	48.0

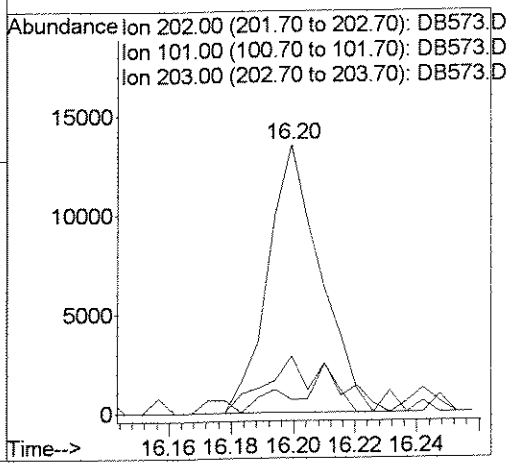




#25
Fluoranthene
Concen: 0.08 ppm
RT: 16.20 min Scan# 1818
Delta R.T. -0.00 min
Lab File: DB573.D
Acq: 10 Sep 2009 2:59 pm

Tgt Ion:202 Resp: 15917

Ion	Ratio	Lower	Upper
202	100		
101	0.0	0.0	41.1
203	21.2	0.0	47.4



SEMIVOLATILE ORGANICS

STANDARDS DATA

Response Factor Report 5973-B

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

Calibration Files
0.1 =DB260.D 0.2 =DB261.D 0.5 =DB262.D
1.0 =DB263.D 2.0 =DB264.D 3.0 =DB265.D 4.0=DB266.D 5.0=DB 10=DB268.D

		Compound	0.1	0.2	0.5	1.0	2.0	3.0	Avg	%RSD
1)	IR	d4-1,4-Dichlorobenzen	ISTD							
2)	TM	1,4-Dioxane	0.967	1.271	1.000	1.061	1.014	1.020	1.021	10.13
3)	TM	Pyridine			1.486	1.517	1.652	1.600	1.549	4.04
4)	IR	d8-Naphthalene	ISTD							
5)	S	SURR4,NITROBENZENE-	0.394	0.399	0.398	0.396	0.425	0.409	0.405	2.29
6)	TM	Nitrobenzene	0.389	0.373	0.432	0.396	0.418	0.414	0.401	4.40
7)	TM	Naphthalene	1.144	1.119	1.159	1.101	1.177	1.138	1.135	2.00
8)	TM	2-Methylnaphthalene	0.651	0.632	0.673	0.647	0.724	0.709	0.681	4.66
9)	TM	1-Methylnaphthalene	0.626	0.666	0.643	0.628	0.659	0.663	0.648	2.38
10)	IR	d10-Acenaphthene	ISTD							
11)	S	SURR5,2-FLUOROBIPHE	1.089	1.422	1.328	1.362	1.394	1.411	1.355	7.76
12)	TM	Acenaphthylene	1.709	1.849	1.831	1.892	1.971	1.962	1.917	5.67
13)	TM	Dimethyl phthalate		1.370	1.534	1.568	1.587	1.607	1.579	6.15
14)	TM	Acenaphthene	1.214	1.183	1.218	1.219	1.233	1.254	1.224	2.38
15)	TM	Dibenzofuran	1.515	1.467	1.679	1.643	1.651	1.700	1.651	6.05
16)	TM	Fluorene	1.059	1.224	1.249	1.302	1.343	1.324	1.286	7.74
17)	TM	Diethylphthalate	1.539	1.436	1.488	1.611	1.659	1.665	1.595	5.44
18)	IR	d10-Phenanthrene	ISTD							
19)	TM	Hexachlorobenzene	0.196	0.229	0.234	0.242	0.242	0.250	0.243	9.69
20)	TM	Phenanthrene	1.023	1.122	1.158	1.215	1.179	1.168	1.155	5.03
21)	TM	Anthracene	0.985	1.074	1.061	1.176	1.173	1.154	1.129	6.46
22)	TM	Carbazole	0.774	0.782	0.862	0.935	0.871	0.796	0.805	10.00
23)	TM	Octachlorostyrene		0.021	0.055	0.056	0.065	0.063	0.058	27.55
24)	TM	Di-n-butylphthalate		1.341	1.323	1.504	1.489	1.500	1.462	5.66
25)	TM	Fluoranthene	0.980	1.070	1.102	1.285	1.243	1.240	1.192	9.51
26)	IR	d12-Chrysene	ISTD							
27)	TM	Pyrene	1.121	1.125	1.195	1.199	1.199	1.259	1.205	4.44
28)	S	SURR6,TERPHENYL-D14	0.802	0.812	0.790	0.820	0.820	0.838	0.830	3.56
29)	TM	Butyl benzyl phthal		0.586	0.559	0.648	0.662	0.658	0.644	7.18
30)	TM	bis(2-Ethylhexyl)ph		0.678	0.721	0.804	0.824	0.849	0.818	9.82
31)	TM	Benzo(a)anthracene	1.007	1.008	1.042	1.106	1.124	1.133	1.096	5.56
32)	TM	Chrysene	0.979	1.056	1.067	1.079	1.084	1.108	1.077	3.93
33)	IR	d12-Perylene	ISTD							
34)	TM	Di-n-octyl phthalat			1.629	1.715	1.833	1.944	1.891	9.47
35)	TM	Benzo(b)Fluoranthen		1.393	1.540	1.441	1.528	1.521	1.518	5.67
36)	TM	Benzo(k)fluoranthen		1.421	1.315	1.401	1.497	1.555	1.466	5.99
37)	TM	Benzo(a)pyrene		1.147	1.247	1.258	1.372	1.421	1.347	8.84
38)	TM	Indeno(1,2,3-cd)Pyr		1.457	1.571	1.602	1.669	1.695	1.593	4.57

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

Calibration Files
0.1 =DB260.D 0.2 =DB261.D 0.5 =DB262.D
1.0 =DB263.D 2.0 =DB264.D 3.0 =DB265.D

		Compound	0.1	0.2	0.5	1.0	2.0	3.0	Avg	%RSD
39)	TM	Dibenz(a,h)anthrace	1.239	1.305	1.341	1.393	1.426	1.359		4.48
40)	TM	Benzo(g,h,i)perylen	1.291	1.349	1.355	1.379	1.341	1.257		10.41

(#) = Out of Range ### Number of calibration levels exceeded format ###

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB264.D Vial: 7
Acq On : 19 Aug 2009 4:38 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	100	0.00
2	TM	1,4-Dioxane	1.021	1.014	0.7	100	0.00
3	TM	Pyridine	1.549	1.652	-6.6	100	0.00
4	IR	d8-Naphthalene	1.000	1.000	0.0	100	0.00
5	S	SURR4,NITROBENZENE-D5	0.405	0.425	-4.9	100	0.00
6	TM	Nitrobenzene	0.401	0.418	-4.2	100	0.00
7	TM	Naphthalene	1.135	1.177	-3.7	100	0.00
8	TM	2-Methylnaphthalene	0.681	0.724	-6.3	100	0.00
9	TM	1-Methylnaphthalene	0.648	0.659	-1.7	100	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	100	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.355	1.394	-2.9	100	0.00
12	TM	Acenaphthylene	1.917	1.971	-2.8	100	0.00
13	TM	Dimethyl phthalate	1.579	1.587	-0.5	100	0.00
14	TM	Acenaphthene	1.224	1.233	-0.7	100	0.00
15	TM	Dibenzofuran	1.651	1.651	0.0	100	0.00
16	TM	Fluorene	1.286	1.343	-4.4	100	0.00
17	TM	Diethylphthalate	1.595	1.659	-4.0	100	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	100	0.00
19	TM	Hexachlorobenzene	0.243	0.242	0.4	100	0.00
20	TM	Phenanthrene	1.155	1.179	-2.1	100	0.00
21	TM	Anthracene	1.129	1.173	-3.9	100	0.00
22	TM	Carbazole	0.805	0.871	-8.2	100	0.00
23	TM	Octachlorostyrene	0.058	0.065	-12.1	100	0.00
24	TM	Di-n-butylphthalate	1.462	1.489	-1.8	100	0.00
25	TM	Fluoranthene	1.192	1.243	-4.3	100	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	100	0.00
27	TM	Pyrene	1.205	1.199	0.5	100	0.00
28	S	SURR6,TERPHENYL-D14	0.830	0.820	1.2	100	0.00
29	TM	Butyl benzyl phthalate	0.644	0.662	-2.8	100	0.00
30	TM	bis(2-Ethylhexyl)phthalate	0.818	0.824	-0.7	100	0.00
31	TM	Benzo(a)anthracene	1.096	1.124	-2.6	100	0.00
32	TM	Chrysene	1.077	1.084	-0.6	100	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	100	0.00
34	TM	Di-n-octyl phthalate	1.891	1.833	3.1	100	0.00
35	TM	Benzo(b)Fluoranthene	1.518	1.528	-0.7	100	0.00
36	TM	Benzo(k)fluoranthene	1.466	1.497	-2.1	100	0.00

(#) = Out of Range

00193

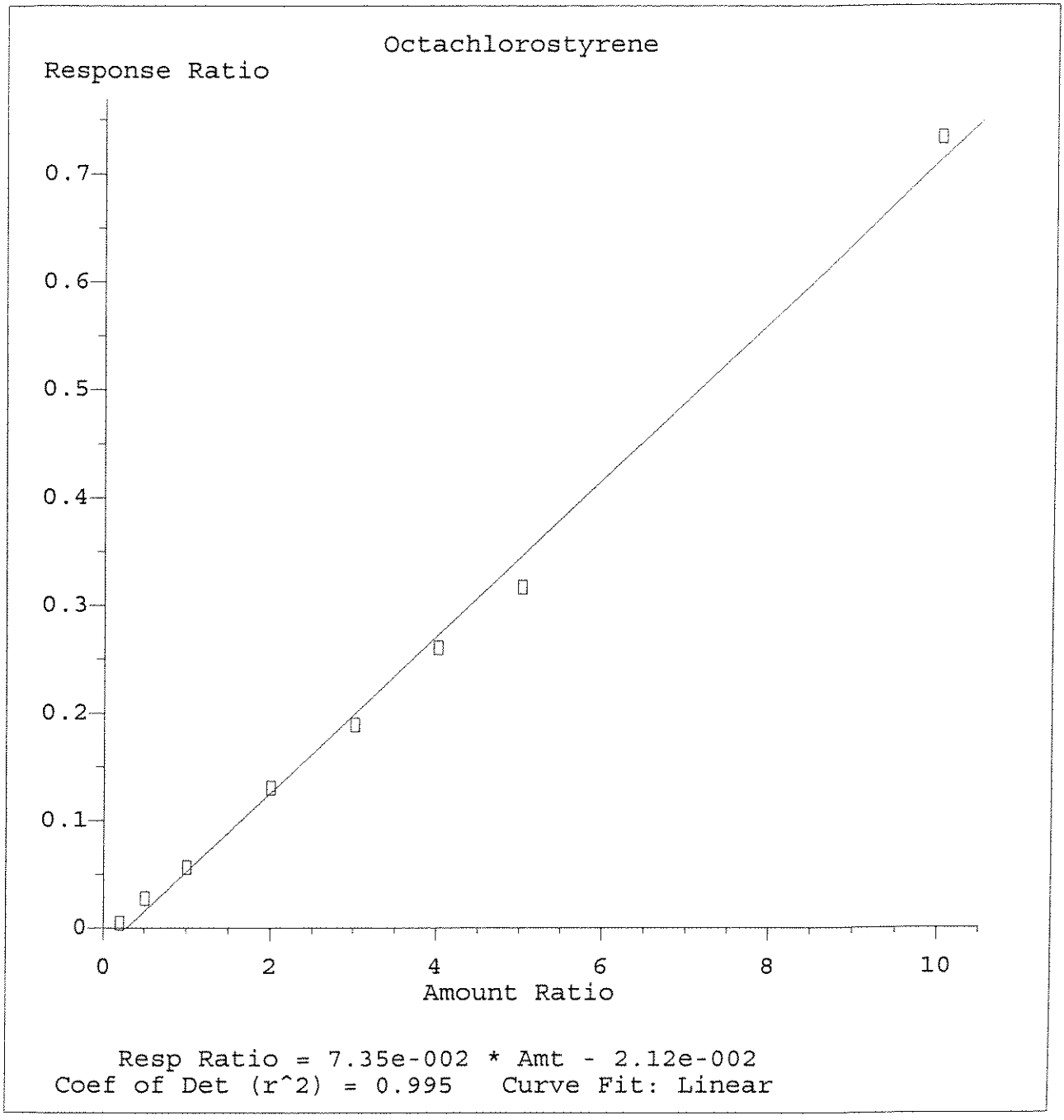
Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB264.D Vial: 7
Acq On : 19 Aug 2009 4:38 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.347	1.372	-1.9	100	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	1.593	1.669	-4.8	100	0.00
39	TM	Dibenz(a,h)anthracene	1.359	1.393	-2.5	100	0.00
40	TM	Benzo(g,h,i)perylene	1.257	1.379	-9.7	100	0.00



Method Name: J:\ACQUDATA\5973B\METHODS\LVI0819.M
Calibration Table Last Updated: Thu Aug 20 10:05:30 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB260.D Vial: 3
Acq On : 19 Aug 2009 1:32 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:20 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	40989	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	164001	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	85326	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	134954	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	133116	1.00	ppm	-0.01
33) d12-Perylene	22.42	264	95881	1.00	ppm	-0.01
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	6462	0.11	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 5.50%#			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	9288	0.08	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 4.00%#			
28) SURR6,TERPHENYL-D14	16.60	244	10673	0.09	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 4.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.59	88	7928	0.18	ppm	79
6) Nitrobenzene	11.44	77	6372	0.10	ppm	95
7) Naphthalene	12.11	128	18765	0.11	ppm	86
8) 2-Methylnaphthalene	12.74	142	10673	0.09	ppm	88
9) 1-Methylnaphthalene	12.85	142	10266	0.09	ppm	89
12) Acenaphthylene	13.58	152	14586	0.09	ppm	96
13) Dimethyl phthalate	13.43	163	11352	0.08	ppm	96
14) Acenaphthene	13.74	153	10356	0.10	ppm	93
15) Dibenzofuran	13.88	168	12927	0.09	ppm	87
16) Fluorene	14.16	166	9038	0.08	ppm	87
17) Diethylphthalate	14.02	149	13129	0.10	ppm	97
19) Hexachlorobenzene	14.67	284	2643m	0.09	ppm	
20) Phenanthrene	14.96	178	13803	0.09	ppm	92
21) Anthracene	15.00	178	13299	0.09	ppm	93
22) Carbazole	15.12	167	10442	0.09	ppm	88
23) Octachlorostyrene	16.00	378	527	0.39	ppm	81
24) Di-n-butylphthalate	15.36	149	18683	0.09	ppm	96
25) Fluoranthene	16.21	202	13227	0.08	ppm	84
27) Pyrene	16.50	202	14919	0.08	ppm	92
30) bis(2-Ethylhexyl)phthalate	18.23	149	19808	0.15	ppm	97
31) Benzo(a)anthracene	18.35	228	13407	0.09	ppm	90
32) Chrysene	18.43	228	13030	0.09	ppm	76

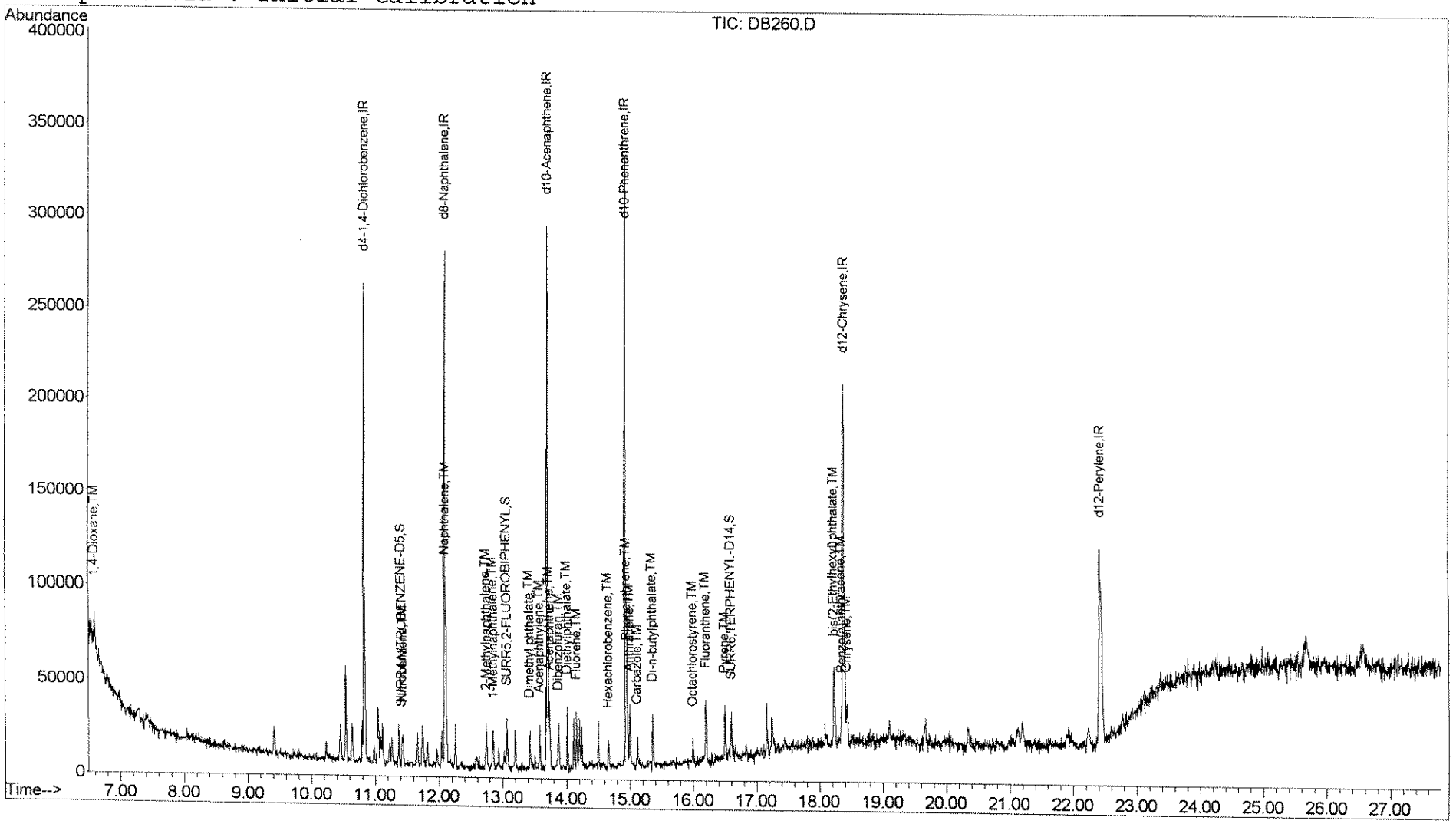
(#) = qualifier out of range (m) = manual integration

00196

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB260.D Vial: 3
Acq On : 19 Aug 2009 1:32 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:20 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



DB260.D LVI0819.M Thu Aug 20 10:08:20 2009

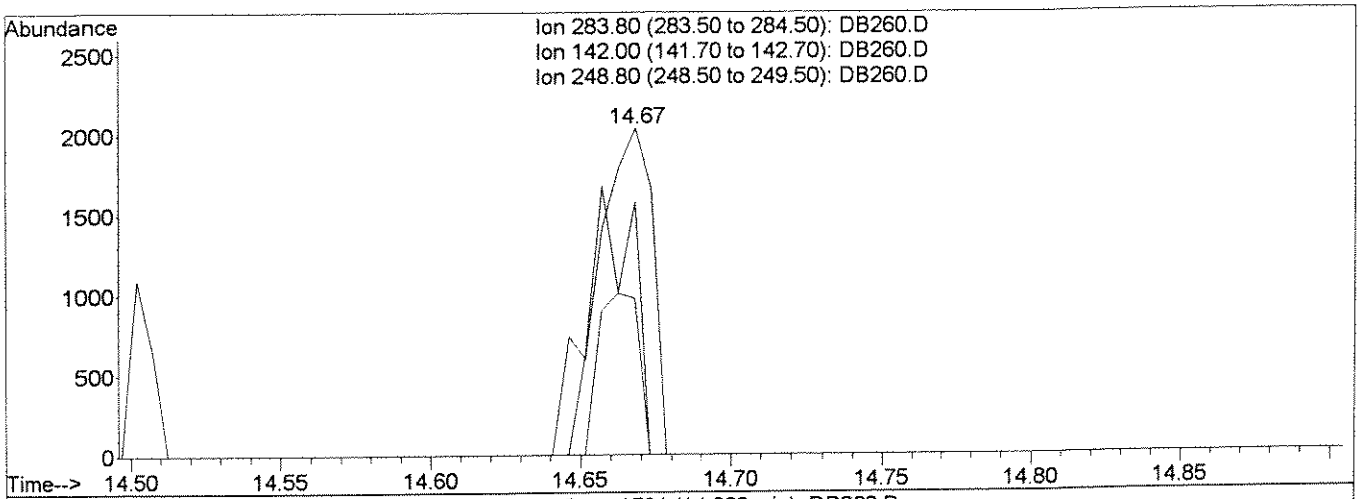
Quantitation Report (Qedit)

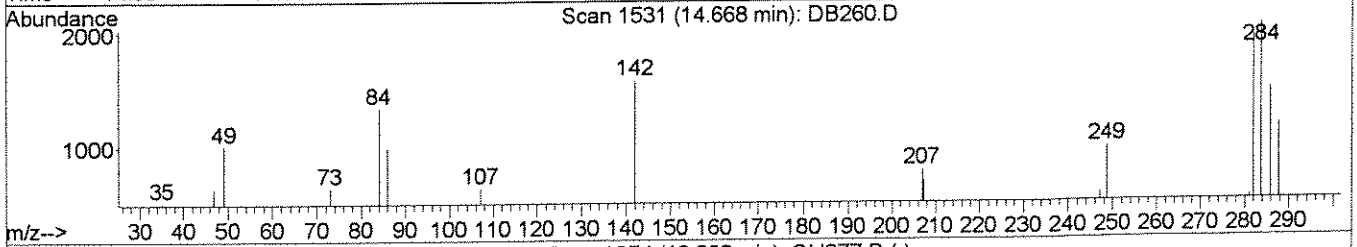
Data File : J:\ACQUDATA\5973B\DATA\081909\DB260.D
Acq On : 19 Aug 2009 1:32 pm
Sample : INTIAL CALIBRATION
Misc : 0.1/0.2 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:18 2009

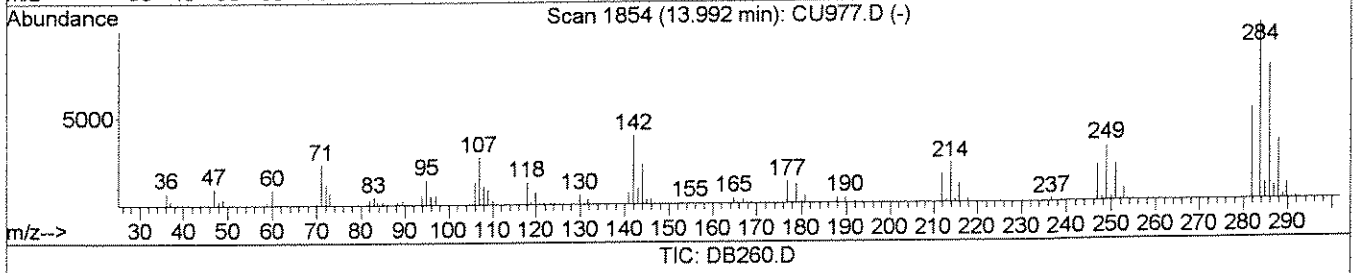
Vial: 3
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:17:23 2009
Response via : Multiple Level Calibration







TIC: DB260.D

(19) Hexachlorobenzene (TM)

14.67min 0.09ppm

response 2643

Ion	Exp%	Act%
283.80	100	100
142.00	41.90	77.35#
248.80	27.50	47.89#
0.00	0.00	0.00

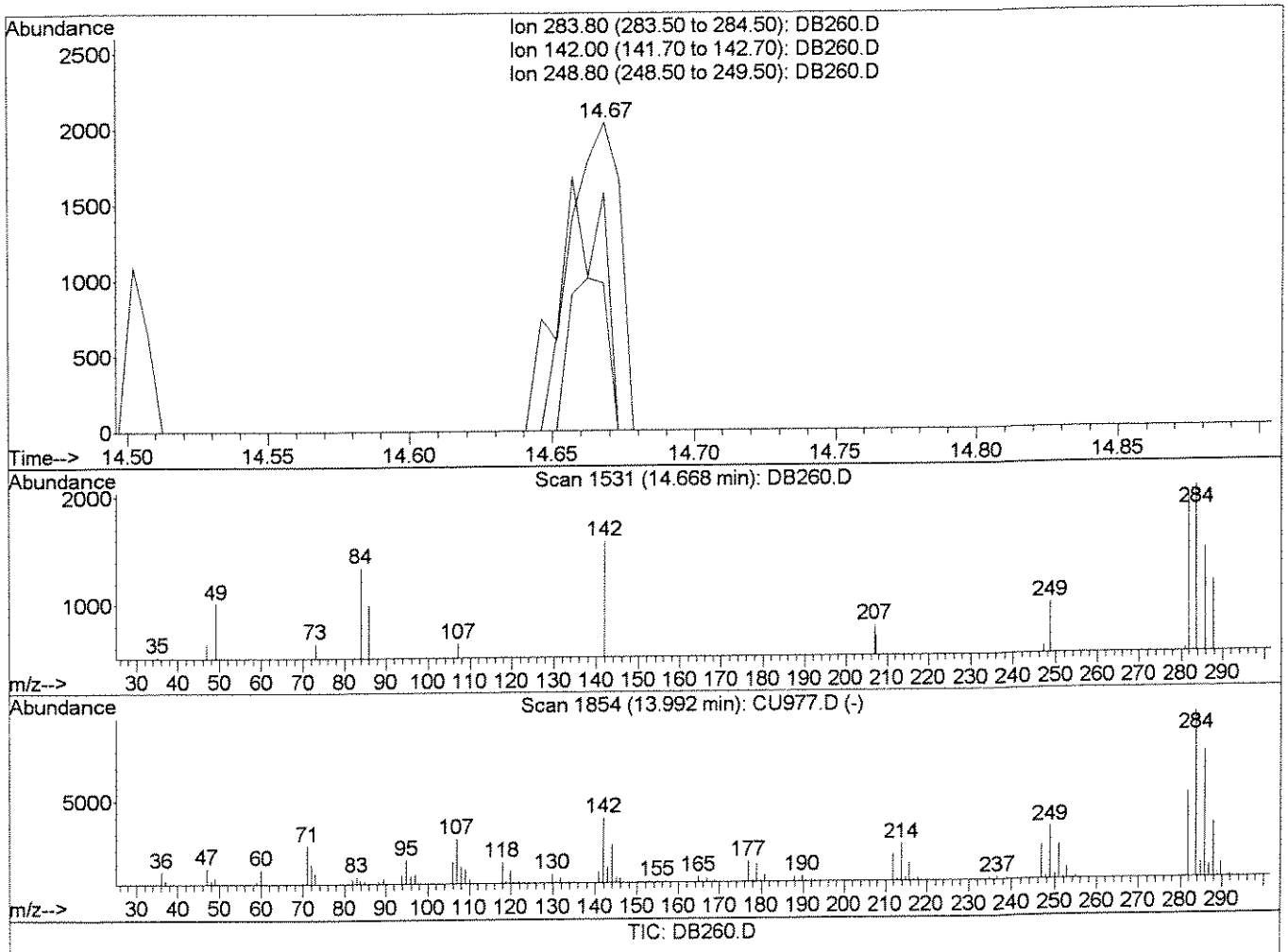
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB260.D
Acq On : 19 Aug 2009 1:32 pm
Sample : INTIAL CALIBRATION
Misc : 0.1/0.2 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:18 2009

Vial: 3
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:17:23 2009
Response via : Multiple Level Calibration



TIC: DB260.D

(19) Hexachlorobenzene (TM)

14.67min 0.09ppm m

response 2643

Ion	Exp%	Act%
283.80	100	100
142.00	41.90	77.35#
248.80	27.50	47.89#
0.00	0.00	0.00

8/20/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:29 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	44072	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	169092	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	91445	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	151530	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	146803	1.00	ppm	0.00
33) d12-Perylene	22.43	264	102940	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.42	82	13502	0.21	ppm	0.01
Spiked Amount 2.000	Range 22 - 124		Recovery = 10.50%#			
11) SURR5,2-FLUOROBIPHENYL	13.07	172	26011	0.22	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 11.00%#			
28) SURR6,TERPHENYL-D14	16.60	244	23848	0.19	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 9.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.60	88	22403	0.49	ppm	92
6) Nitrobenzene	11.43	77	12623	0.19	ppm	96
7) Naphthalene	12.12	128	37829	0.21	ppm	96
8) 2-Methylnaphthalene	12.74	142	21381	0.18	ppm	96
9) 1-Methylnaphthalene	12.84	142	22515	0.20	ppm	88
12) Acenaphthylene	13.58	152	33809	0.20	ppm	93
13) Dimethyl phthalate	13.43	163	25062m	0.18	ppm	
14) Acenaphthene	13.74	153	21639	0.19	ppm	89
15) Dibenzofuran	13.88	168	26834	0.18	ppm	77
16) Fluorene	14.16	166	22391	0.19	ppm	93
17) Diethylphthalate	14.01	149	26266	0.18	ppm	95
19) Hexachlorobenzene	14.67	284	6941	0.21	ppm	84
20) Phenanthrene	14.96	178	33992	0.19	ppm	96
21) Anthracene	15.00	178	32537	0.19	ppm	91
22) Carbazole	15.12	167	23712	0.19	ppm	97
23) Octachlorostyrene	16.00	378	637m	0.32	ppm	
24) Di-n-butylphthalate	15.36	149	40649m	0.18	ppm	
25) Fluoranthene	16.20	202	32435	0.18	ppm	97
27) Pyrene	16.50	202	33019	0.17	ppm	90
29) Butyl benzyl phthalate	17.24	149	17201m	0.16	ppm	
30) bis(2-Ethylhexyl)phthalate	18.23	149	39796	0.27	ppm	97
31) Benzo(a)anthracene	18.35	228	29581	0.18	ppm	93
32) Chrysene	18.44	228	30999	0.19	ppm	88
35) Benzo(b)Fluoranthene	21.12	252	28680	0.18	ppm	97
36) Benzo(k)fluoranthene	21.18	252	29249	0.20	ppm	84
37) Benzo(a)pyrene	22.25	252	23608	0.17	ppm	94

(#) = qualifier out of range (m) = manual integration

00200

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:29 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	Indeno(1,2,3-cd)Pyrene	25.65	276	30000m	0.18	ppm	
39)	Dibenz(a,h)anthracene	25.66	278	25502m	0.18	ppm	
40)	Benzo(g,h,i)perylene	26.57	276	26589	0.20	ppm	66

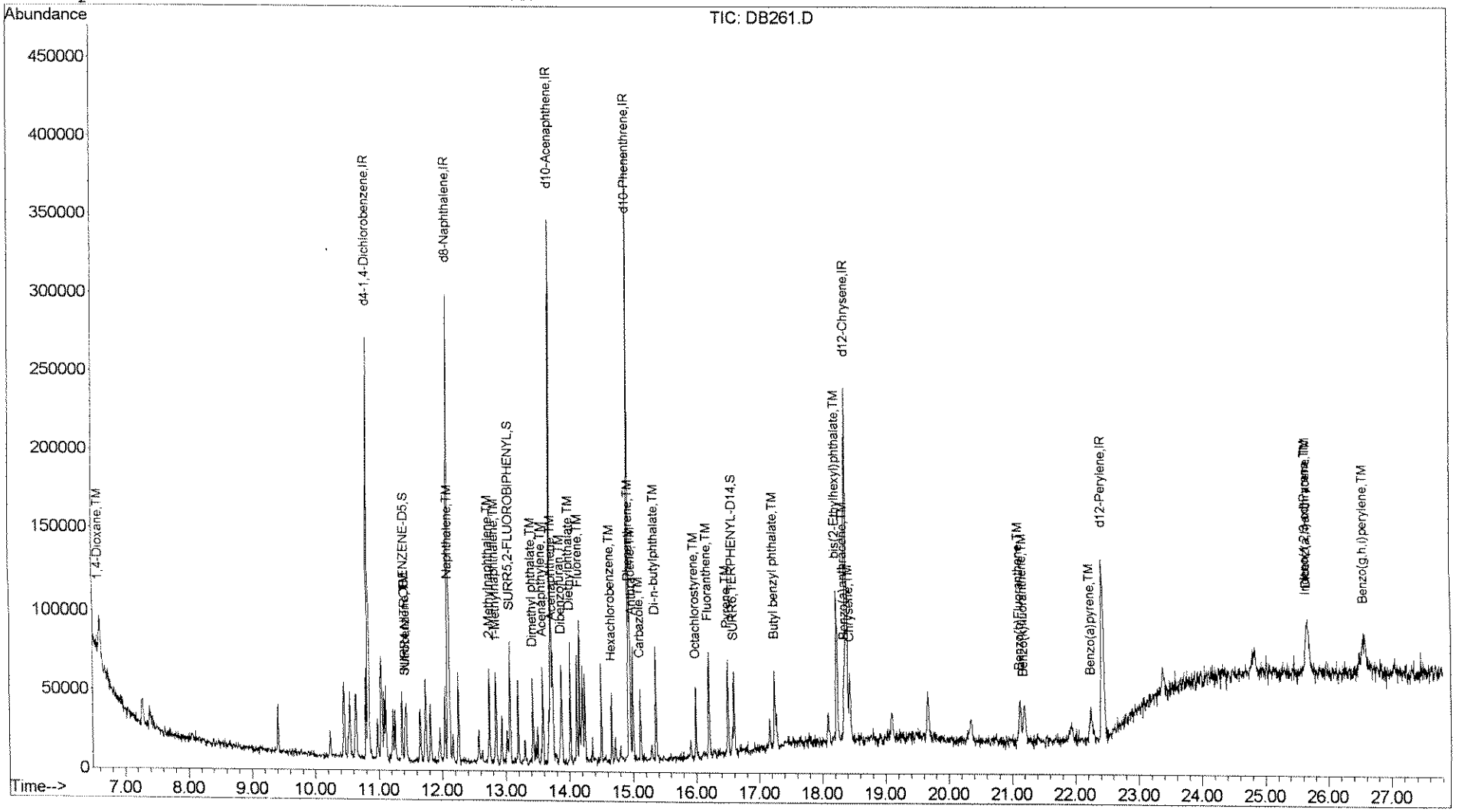
(#) = qualifier out of range (m) = manual integration

00201

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:29 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



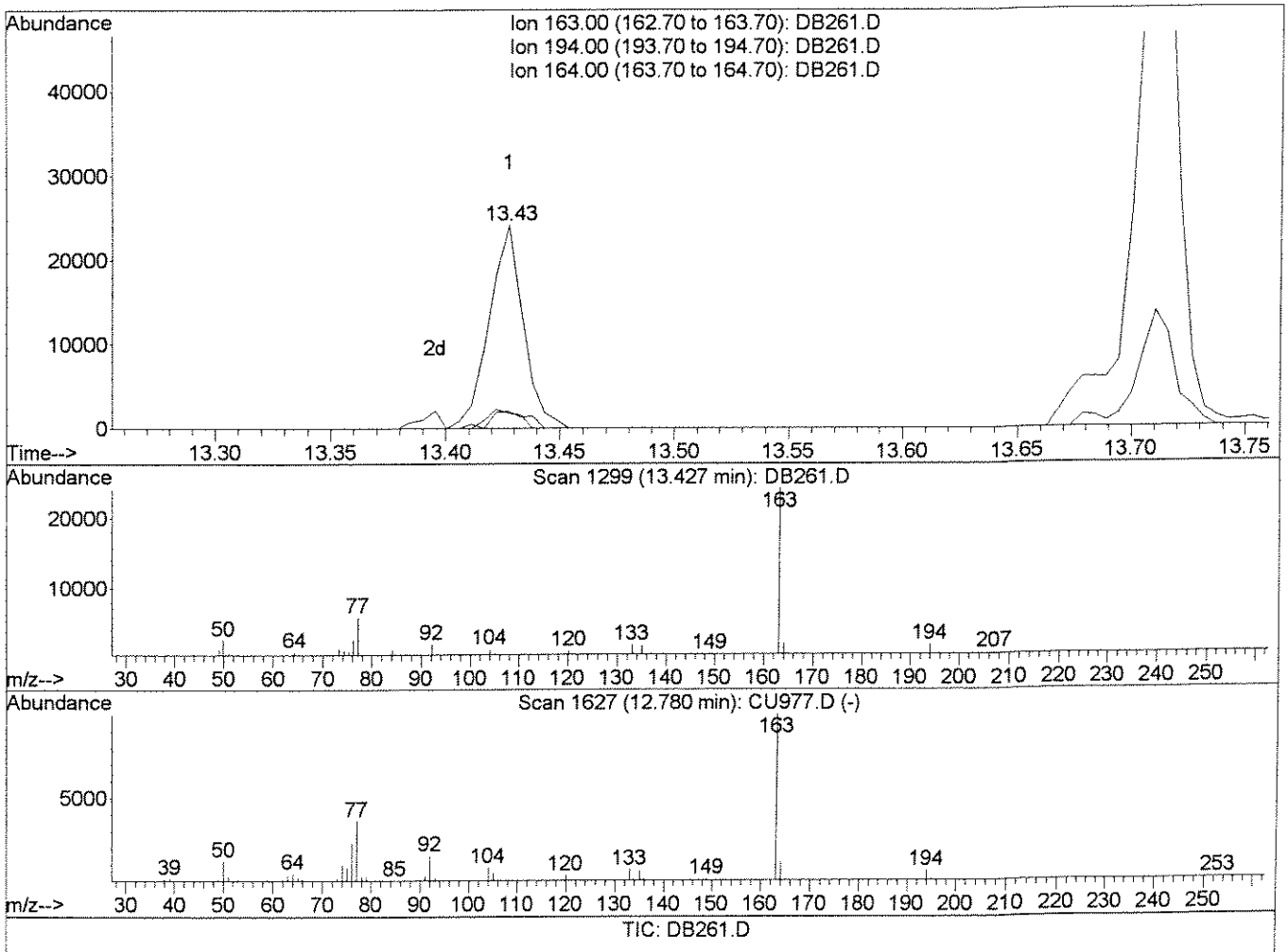
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D
Acq On : 19 Aug 2009 2:18 pm
Sample : INTIAL CALIBRATION
Misc : 0.2/0.4 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:27 2009

Vial: 4
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration



TIC: DB261.D

(13) Dimethyl phthalate (TM)

13.43min 0.18ppm

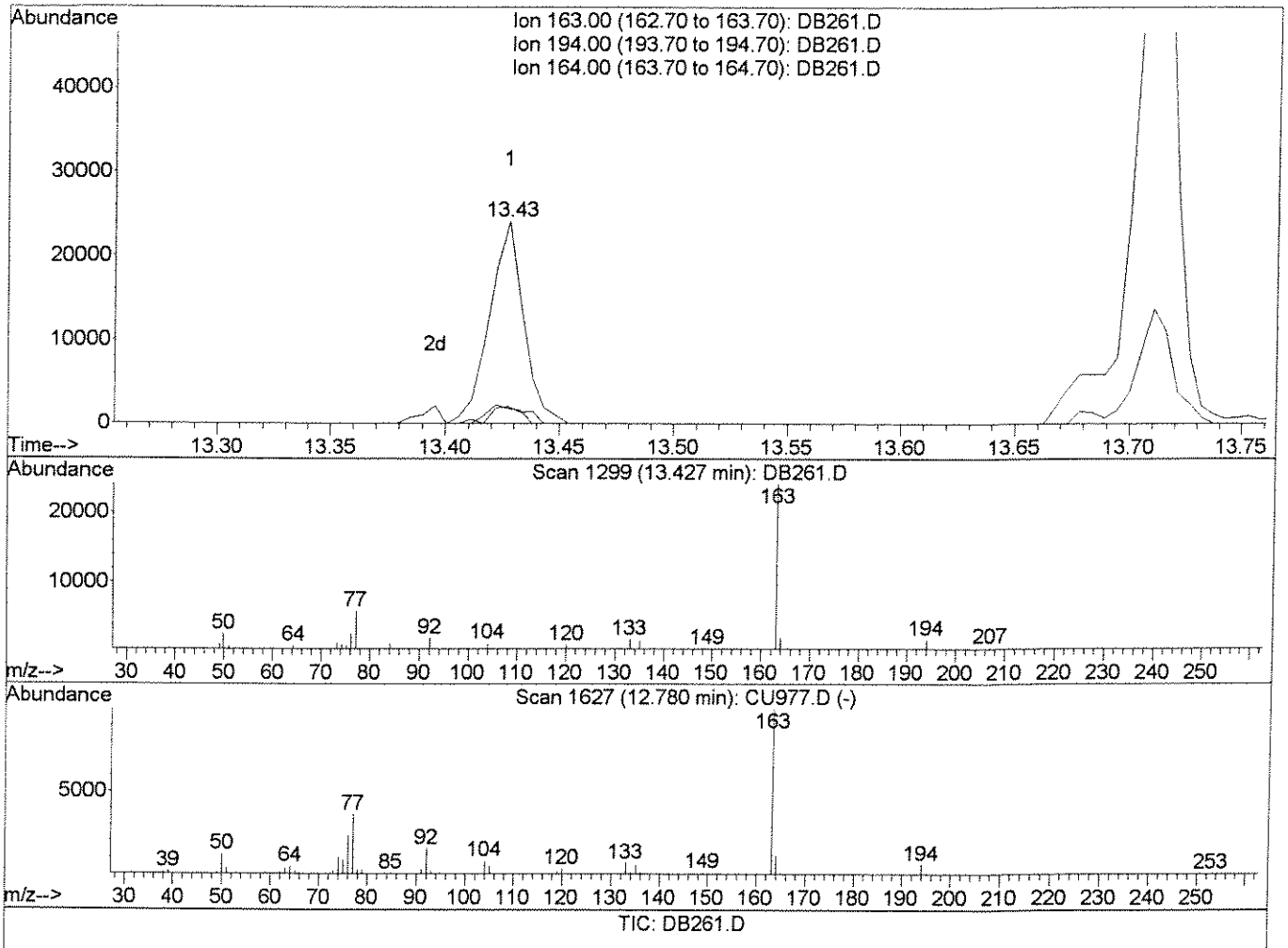
response 25062

Ion	Exp%	Act%
163.00	100	100
194.00	5.80	7.56#
164.00	9.60	8.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:27 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration



TIC: DB261.D

(13) Dimethyl phthalate (TM)

13.43min 0.18ppm m

response 25062

Ion	Exp%	Act%
163.00	100	100
194.00	5.80	7.56#
164.00	9.60	8.43
0.00	0.00	0.00

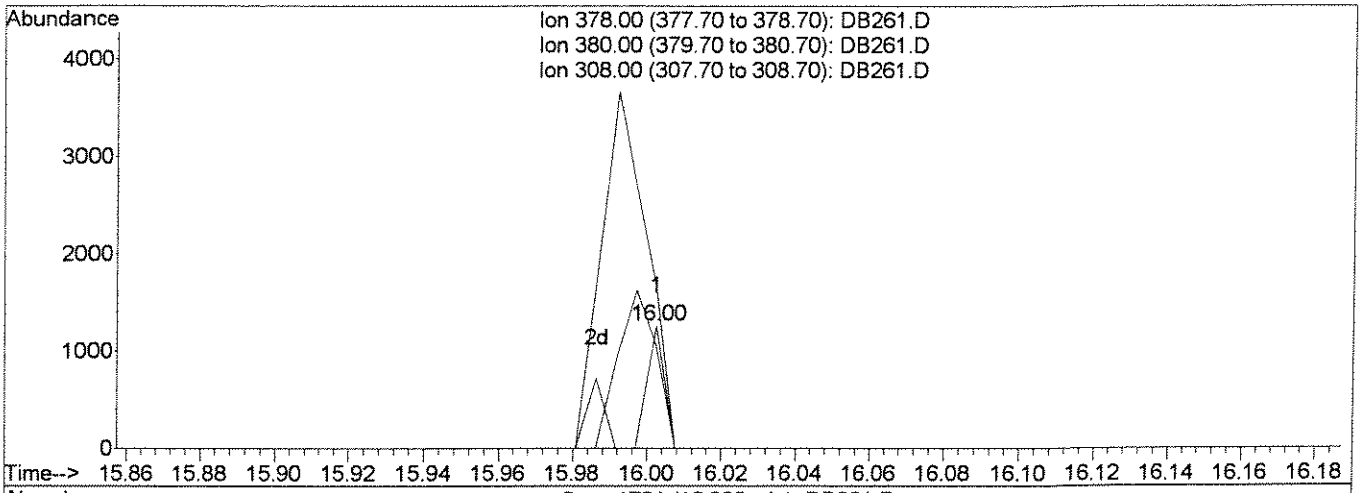
VMU 1/1

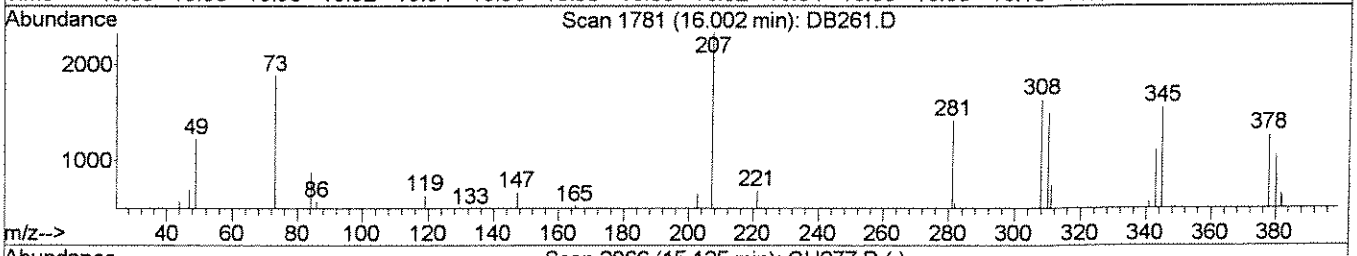
8/20/09

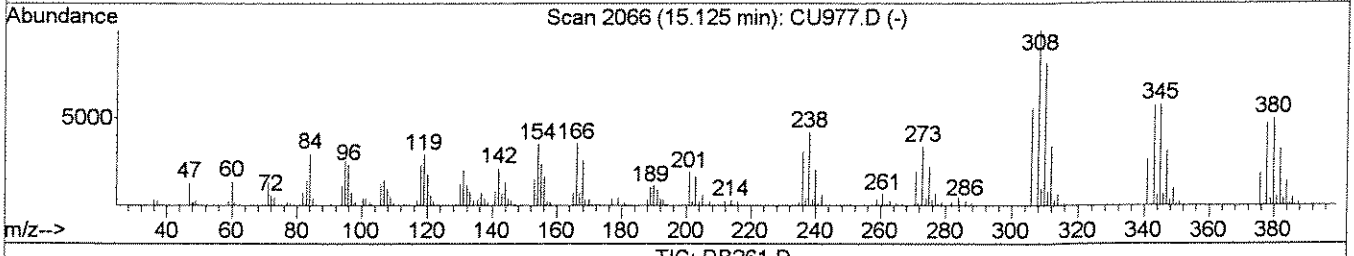
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:27 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(23) Octachlorostyrene (TM)

16.00min 0.29ppm

response 405

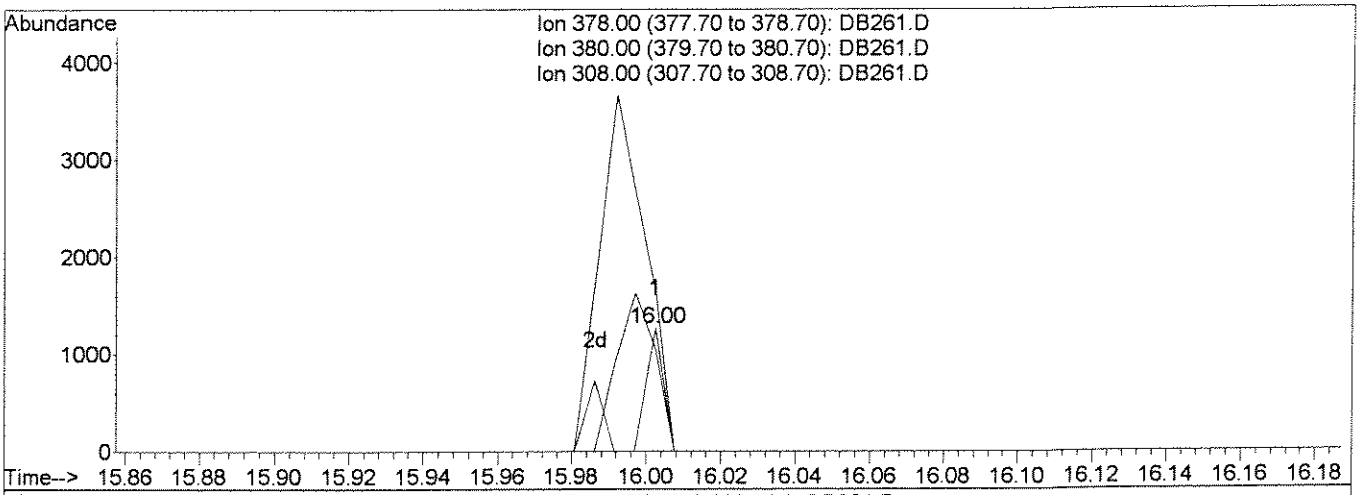
Ion	Exp%	Act%
378.00	100	100
380.00	98.40	18.80#
308.00	165.40	24.70#
0.00	0.00	0.00

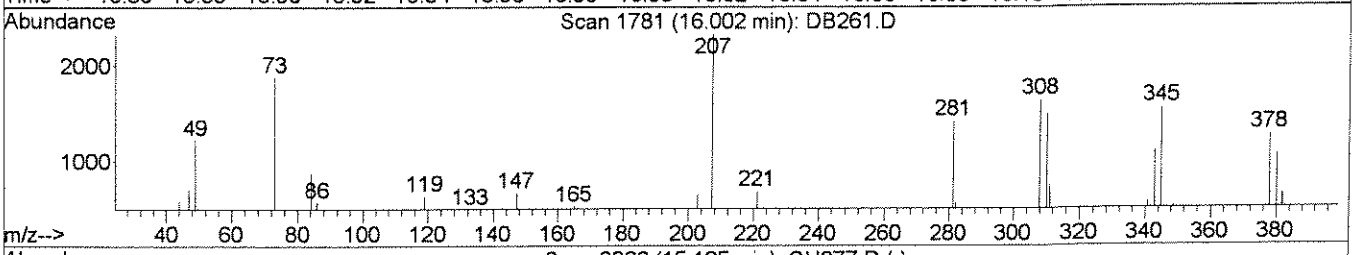
DB261.D LVI0819.M Thu Aug 20 09:28:09 2009

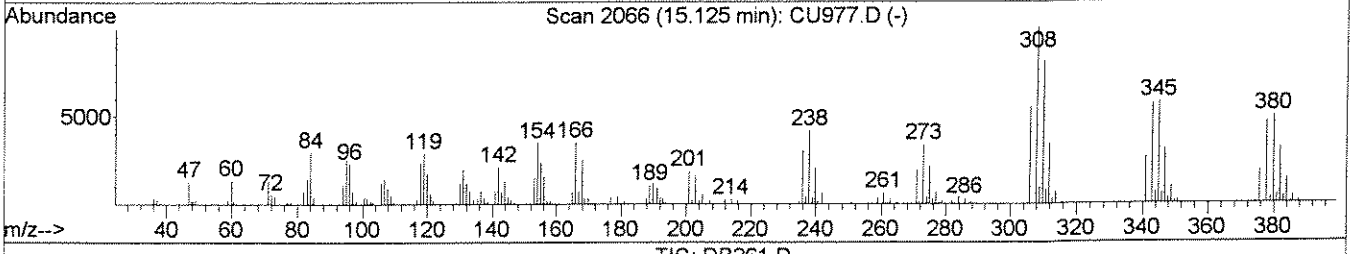
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:28 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(23) Octachlorostyrene (TM)

16.00min 0.32ppm m

response 637

Ion	Exp%	Act%
378.00	100	100
380.00	98.40	83.37
308.00	165.40	129.37
0.00	0.00	0.00

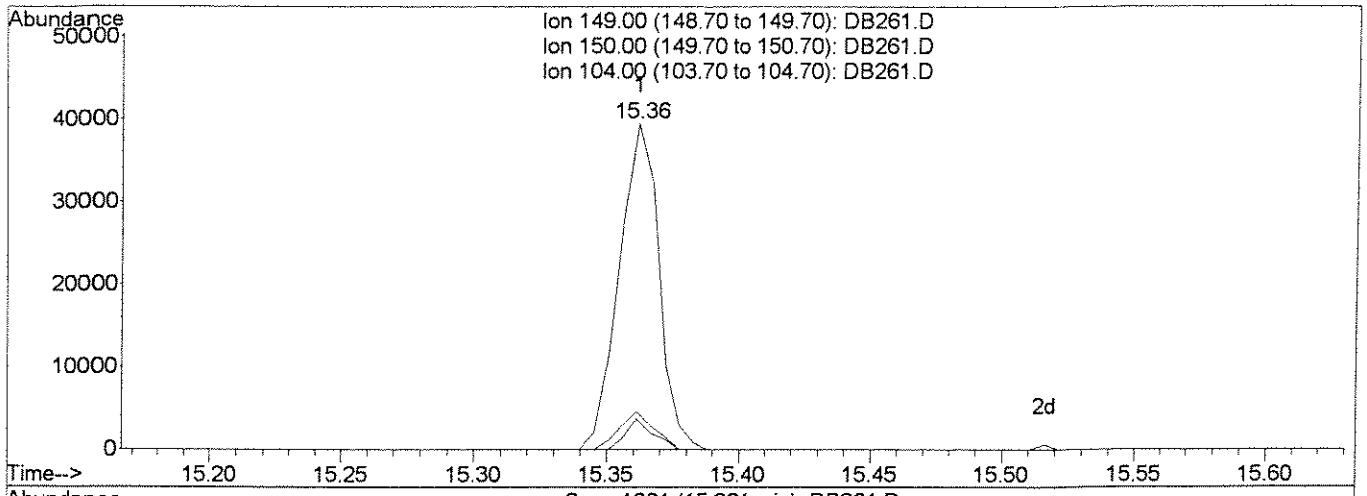
mv 8/20

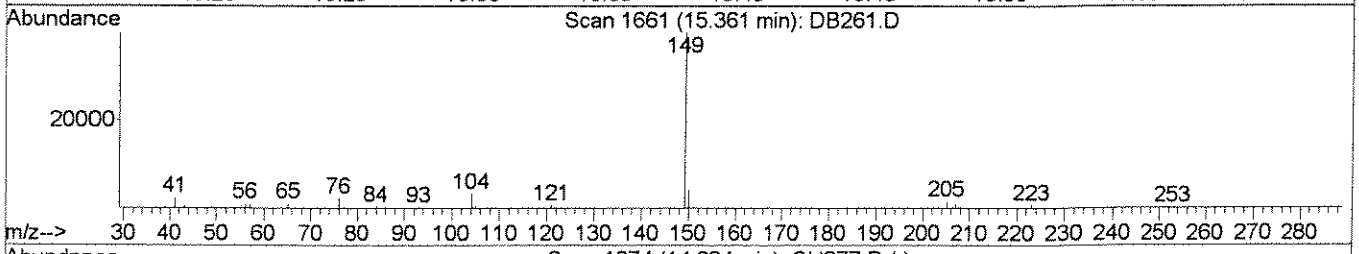
8/20/09

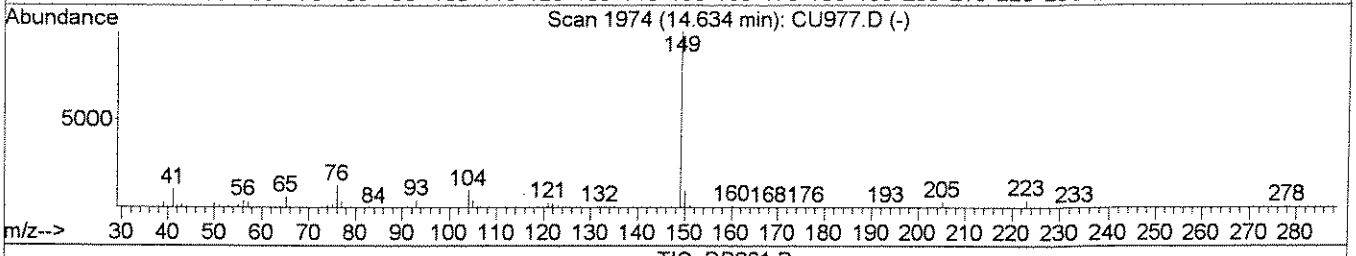
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:28 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(24) Di-n-butylphthalate (TM)

15.36min 0.18ppm

response 40655

Ion	Exp%	Act%
149.00	100	100
150.00	8.80	11.50#
104.00	6.00	9.49#
0.00	0.00	0.00

DB261.D LVI0819.M Thu Aug 20 09:28:27 2009

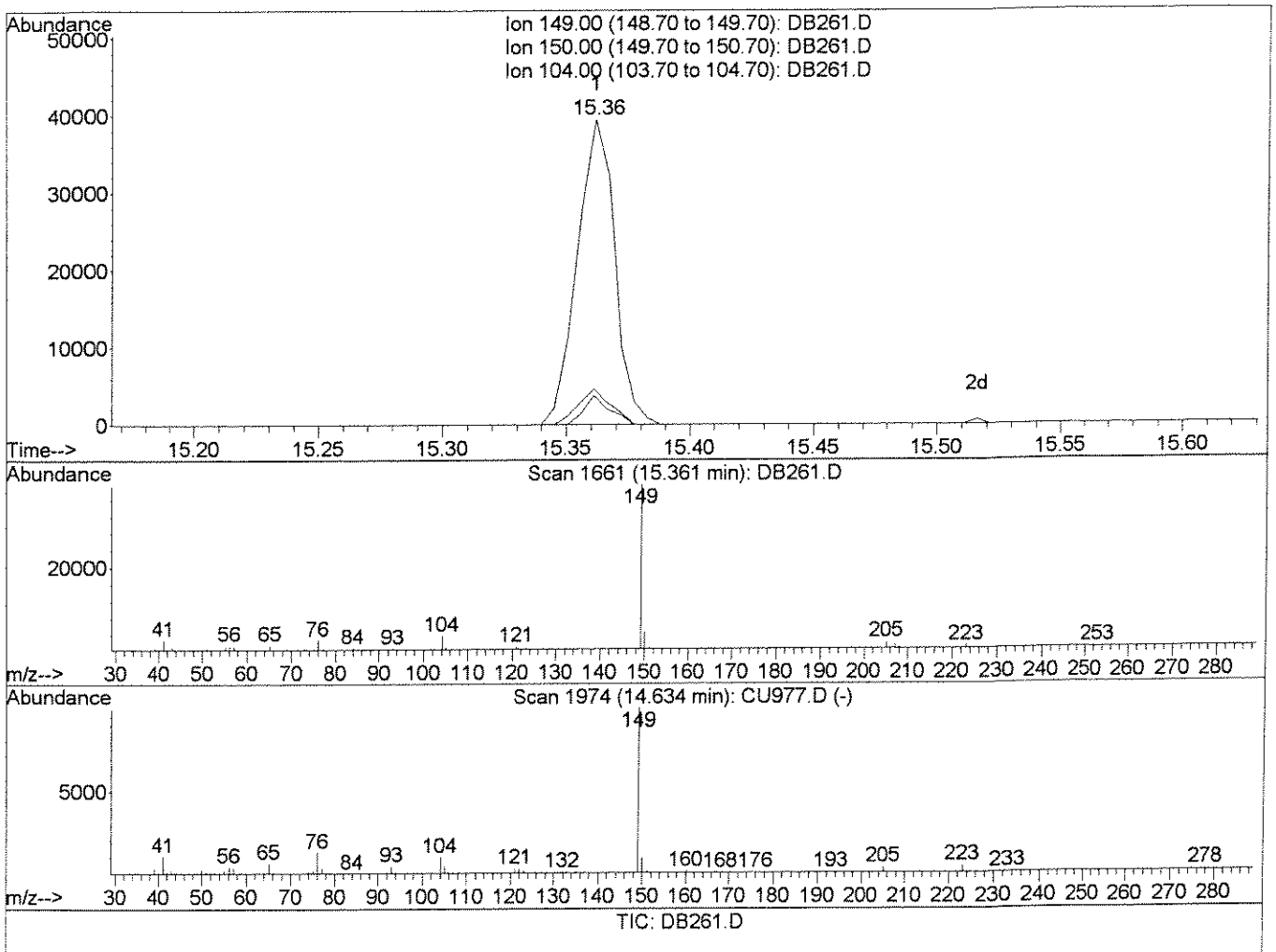
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D
Acq On : 19 Aug 2009 2:18 pm
Sample : INTIAL CALIBRATION
Misc : 0.2/0.4 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:28 2009

Vial: 4
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration



TIC: DB261.D

(24) Di-n-butylphthalate (TM)

15.36min 0.18ppm m

response 40649

Ion	Exp%	Act%
149.00	100	100
150.00	8.80	11.50#
104.00	6.00	9.49#
0.00	0.00	0.00

mw 9/1

8/20/09

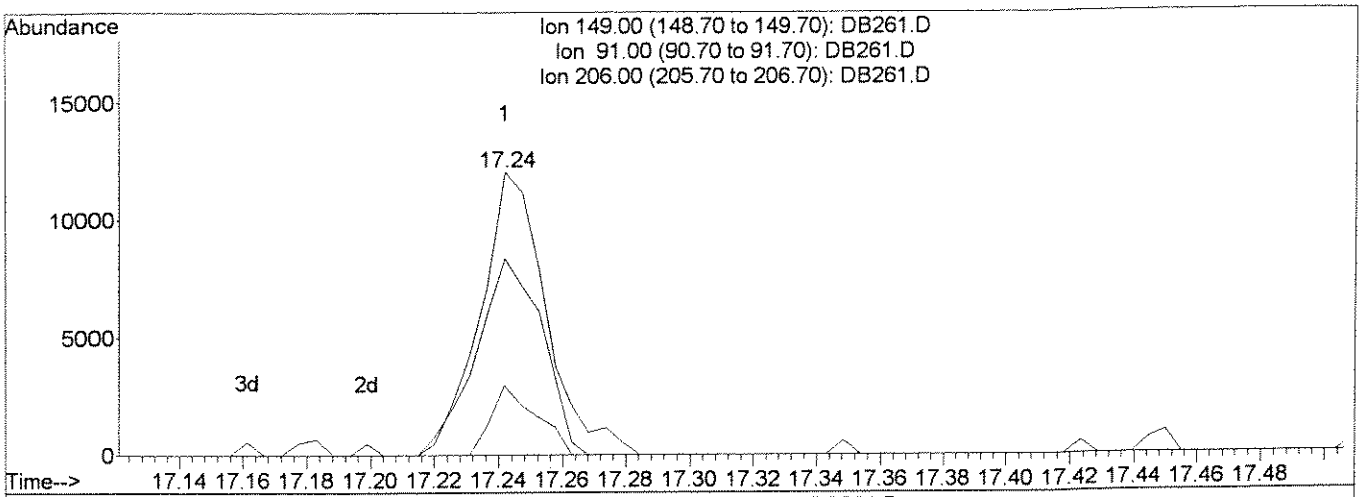
Quantitation Report (Qedit)

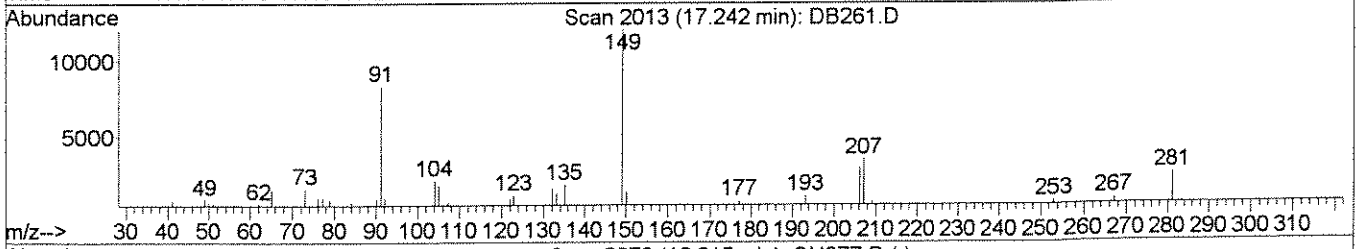
Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D
Acq On : 19 Aug 2009 2:18 pm
Sample : INTIAL CALIBRATION
Misc : 0.2/0.4 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:28 2009

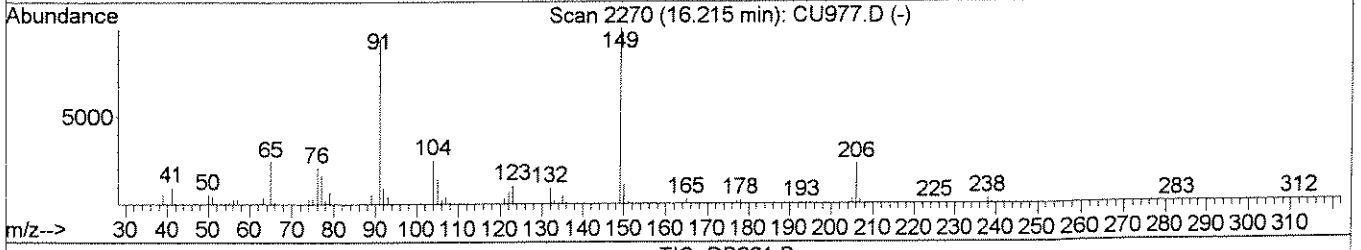
Vial: 4
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(29) Butyl benzyl phthalate (TM)

17.24min 0.16ppm

response 17202

Ion	Exp%	Act%
149.00	100	100
91.00	76.50	69.52
206.00	17.10	24.67#
0.00	0.00	0.00

17

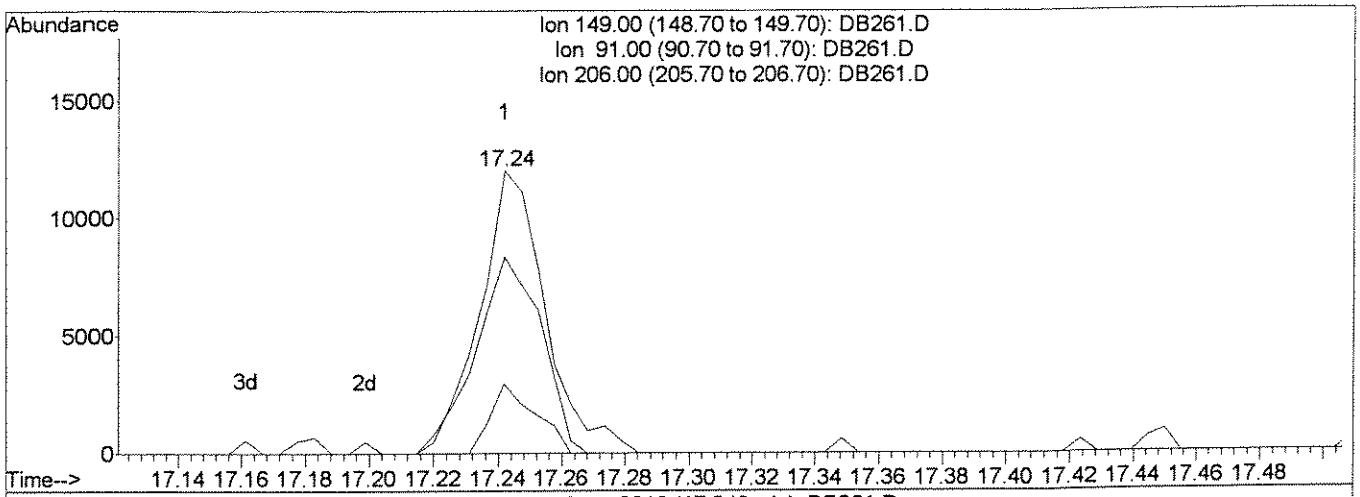
Quantitation Report (Qedit)

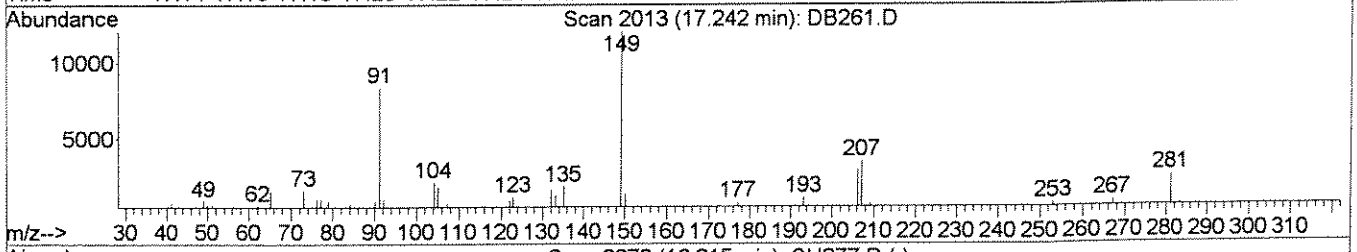
Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D
Acq On : 19 Aug 2009 2:18 pm
Sample : INTIAL CALIBRATION
Misc : 0.2/0.4 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:28 2009

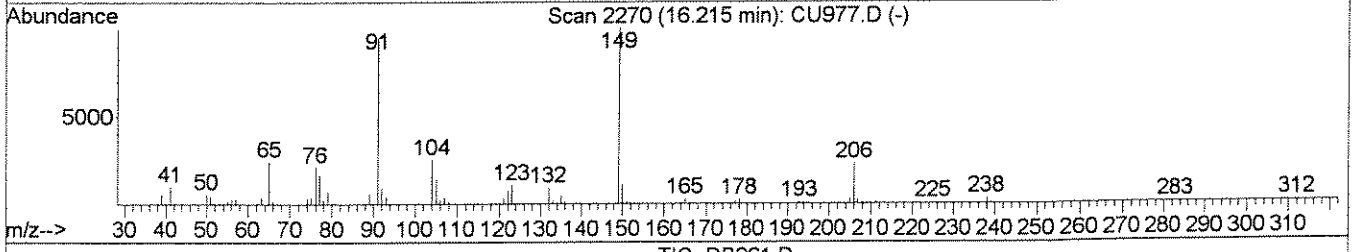
Vial: 4
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(29) Butyl benzyl phthalate (TM)

17.24min 0.16ppm m

response 17201

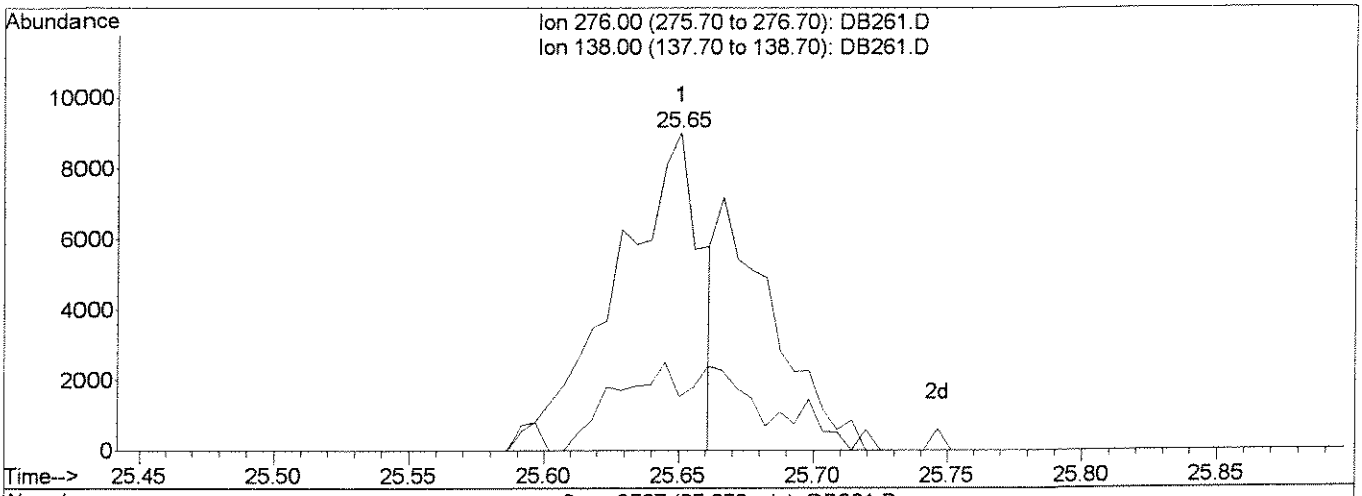
Ion	Exp%	Act%
149.00	100	100
91.00	76.50	69.52
206.00	17.10	24.67#
0.00	0.00	0.00

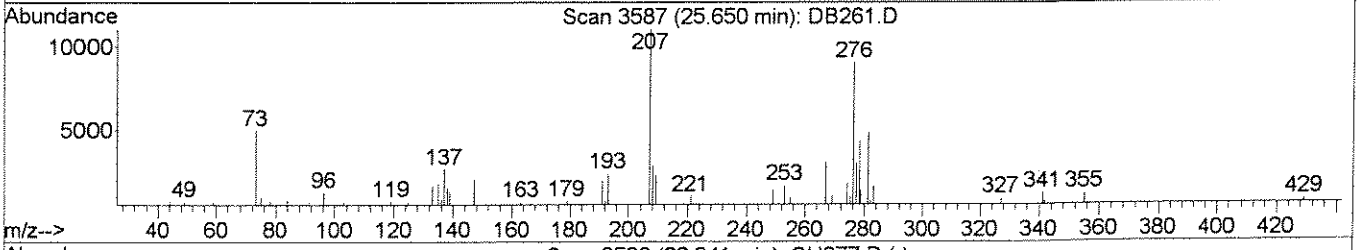
8/20/09

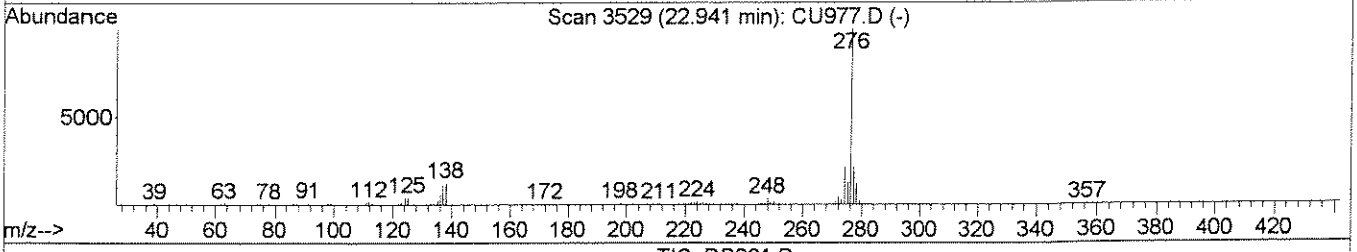
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:28 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(38) Indeno(1,2,3-cd)Pyrene (TM)

25.65min 0.12ppm

response 19565

Ion	Exp%	Act%
276.00	100	100
138.00	27.20	5.35
0.00	0.00	0.00
0.00	0.00	0.00

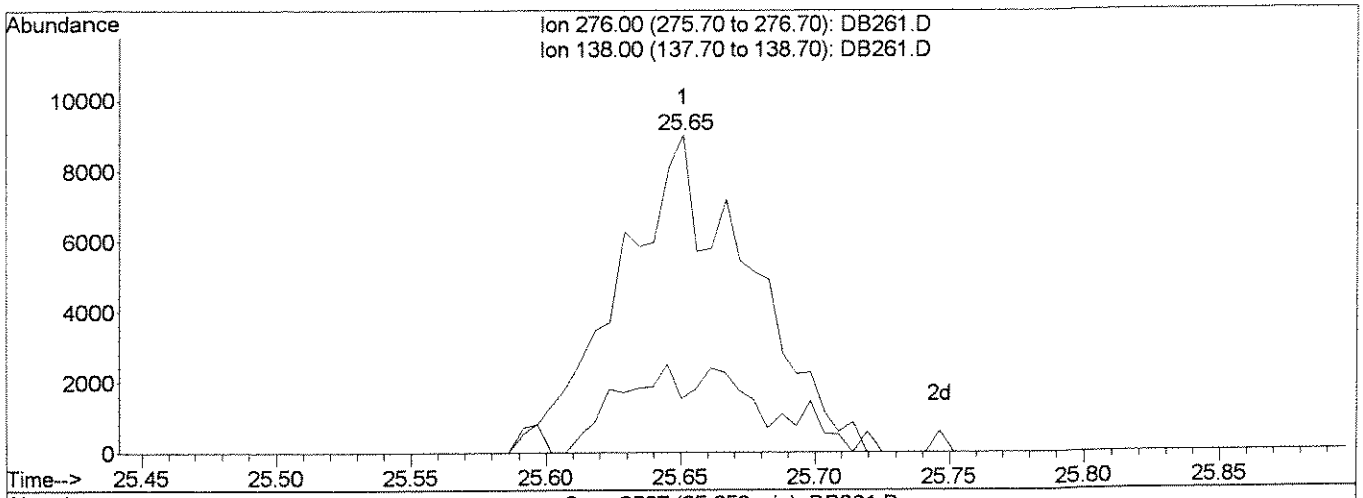
Quantitation Report (Qedit)

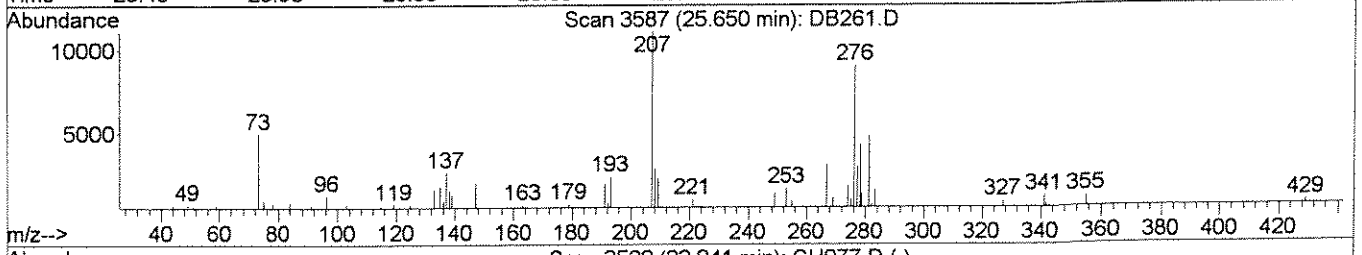
Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D
Acq On : 19 Aug 2009 2:18 pm
Sample : INTIAL CALIBRATION
Misc : 0.2/0.4 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:29 2009

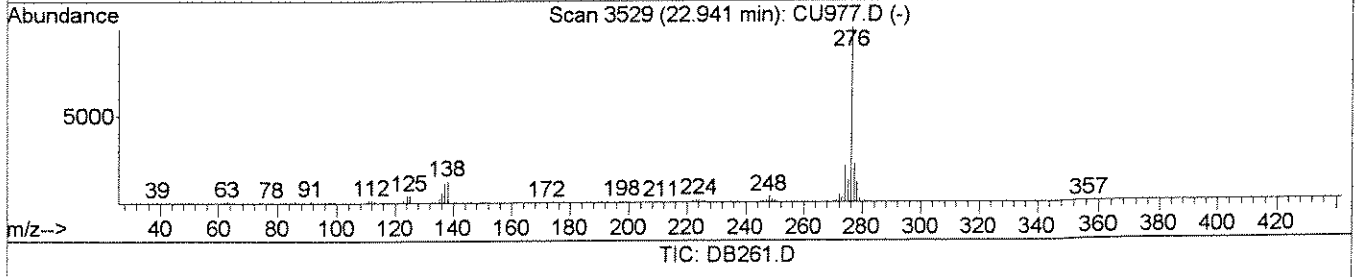
Vial: 4
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(38) Indeno(1,2,3-cd)Pyrene (TM)

25.65min 0.18ppm m

response 30000

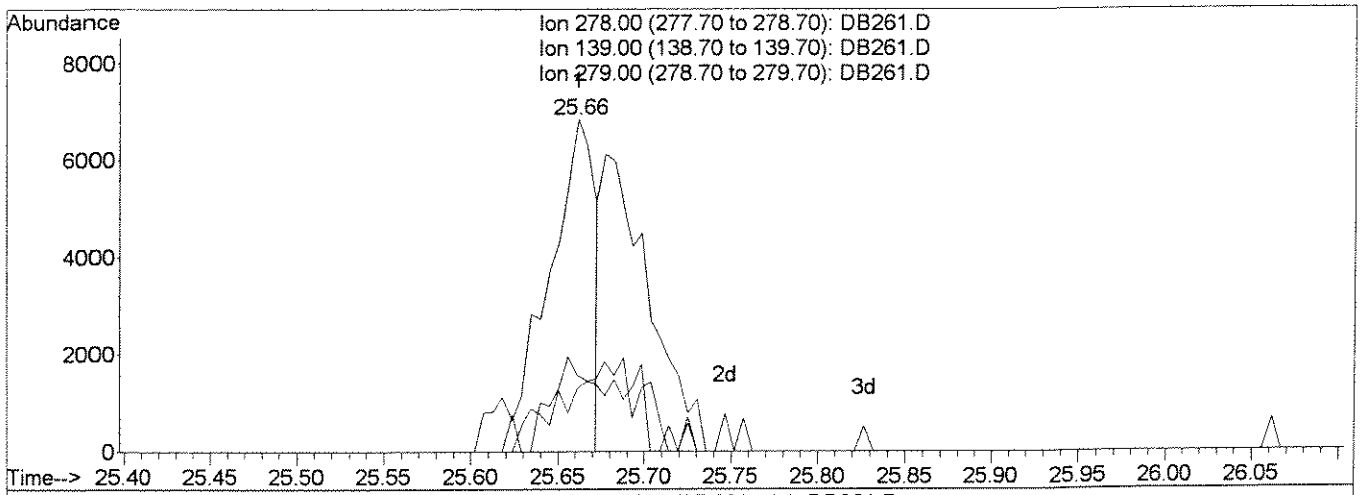
Ion	Exp%	Act%
276.00	100	100
138.00	27.20	16.93
0.00	0.00	0.00
0.00	0.00	0.00

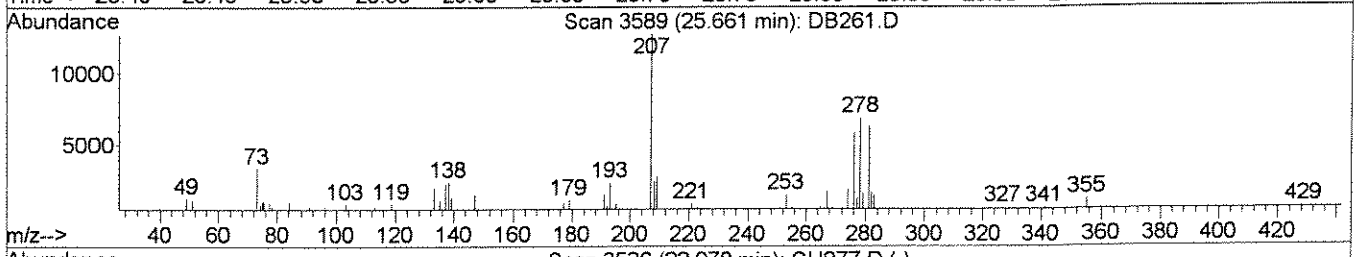
mu' 8/20/09

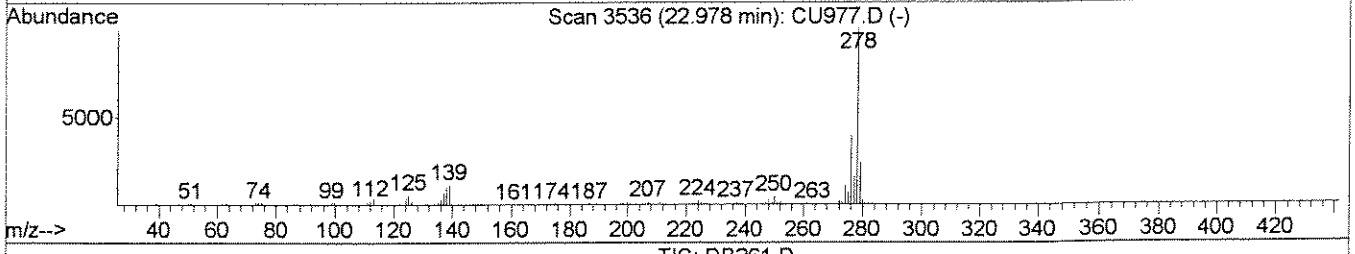
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:29 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration







TIC: DB261.D

(39) Dibenz(a,h)anthracene (TM)

25.66min 0.09ppm

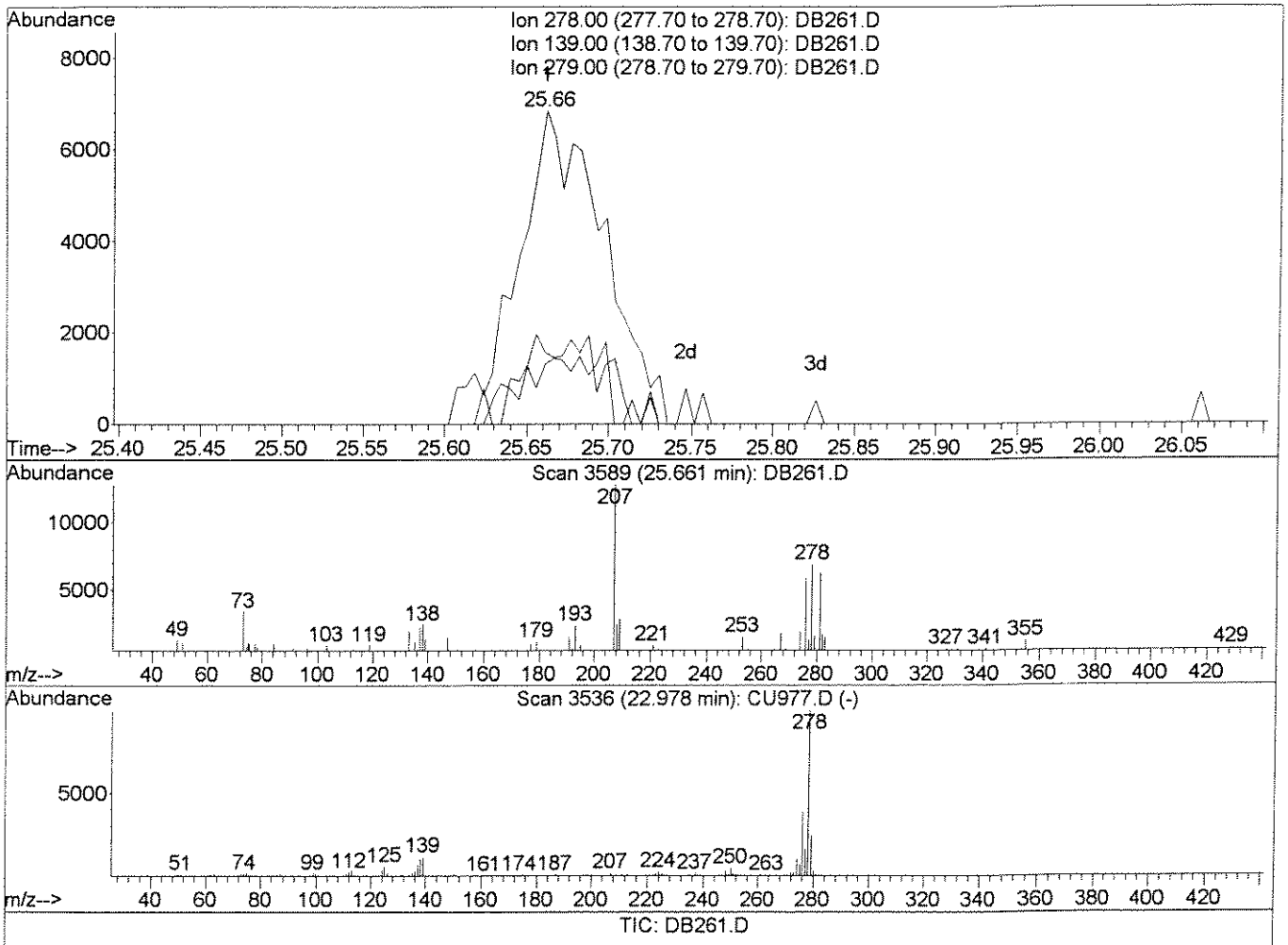
response 13421

Ion	Exp%	Act%
278.00	100	100
139.00	15.80	14.08
279.00	21.20	19.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB261.D Vial: 4
Acq On : 19 Aug 2009 2:18 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:29 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:26:19 2009
Response via : Multiple Level Calibration



TIC: DB261.D

(39) Dibenz(a,h)anthracene (TM)

25.66min 0.18ppm m

response 25502

Ion	Exp%	Act%
278.00	100	100
139.00	15.80	19.00
279.00	21.20	22.94
0.00	0.00	0.00

8/20/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:32 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	45288m	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	168286	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	89419	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	151009	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	152282	1.00	ppm	0.00
33) d12-Perylene	22.43	264	108160	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	33509	0.54	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 27.00%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	59363	0.51	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 25.50%#			
28) SURR6,TERPHENYL-D14	16.60	244	60160	0.46	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 23.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.60	88	45292	0.92	ppm	86
3) Pyridine	7.36	79	33651m	0.54	ppm	
6) Nitrobenzene	11.43	77	36352	0.56	ppm	88
7) Naphthalene	12.11	128	97526	0.55	ppm	89
8) 2-Methylnaphthalene	12.74	142	56619	0.48	ppm	96
9) 1-Methylnaphthalene	12.84	142	54094	0.48	ppm	83
12) Acenaphthylene	13.58	152	81867	0.49	ppm	96
13) Dimethyl phthalate	13.43	163	68586m	0.49	ppm	
14) Acenaphthene	13.74	153	54454	0.49	ppm	98
15) Dibenzofuran	13.88	168	75073	0.52	ppm	87
16) Fluorene	14.16	166	55854	0.48	ppm	99
17) Diethylphthalate	14.01	149	66515	0.47	ppm	96
19) Hexachlorobenzene	14.66	284	17655	0.53	ppm	89
20) Phenanthrene	14.95	178	87408	0.48	ppm	97
21) Anthracene	15.00	178	80086	0.48	ppm	99
22) Carbazole	15.11	167	65066	0.48	ppm	93
23) Octachlorostyrene	16.00	378	4137	0.81	ppm	82
24) Di-n-butylphthalate	15.36	149	99913	0.43	ppm	97
25) Fluoranthene	16.20	202	83212	0.46	ppm	87
27) Pyrene	16.50	202	91003	0.45	ppm	90
29) Butyl benzyl phthalate	17.25	149	42580m	0.37	ppm	
30) bis(2-Ethylhexyl)phthalate	18.23	149	109850	0.71	ppm	91
31) Benzo(a)anthracene	18.35	228	79347	0.46	ppm	93
32) Chrysene	18.44	228	81242	0.49	ppm	96
34) Di-n-octyl phthalate	19.67	149	88120m	0.61	ppm	
35) Benzo(b)Fluoranthene	21.12	252	83262	0.50	ppm	88

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:32 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

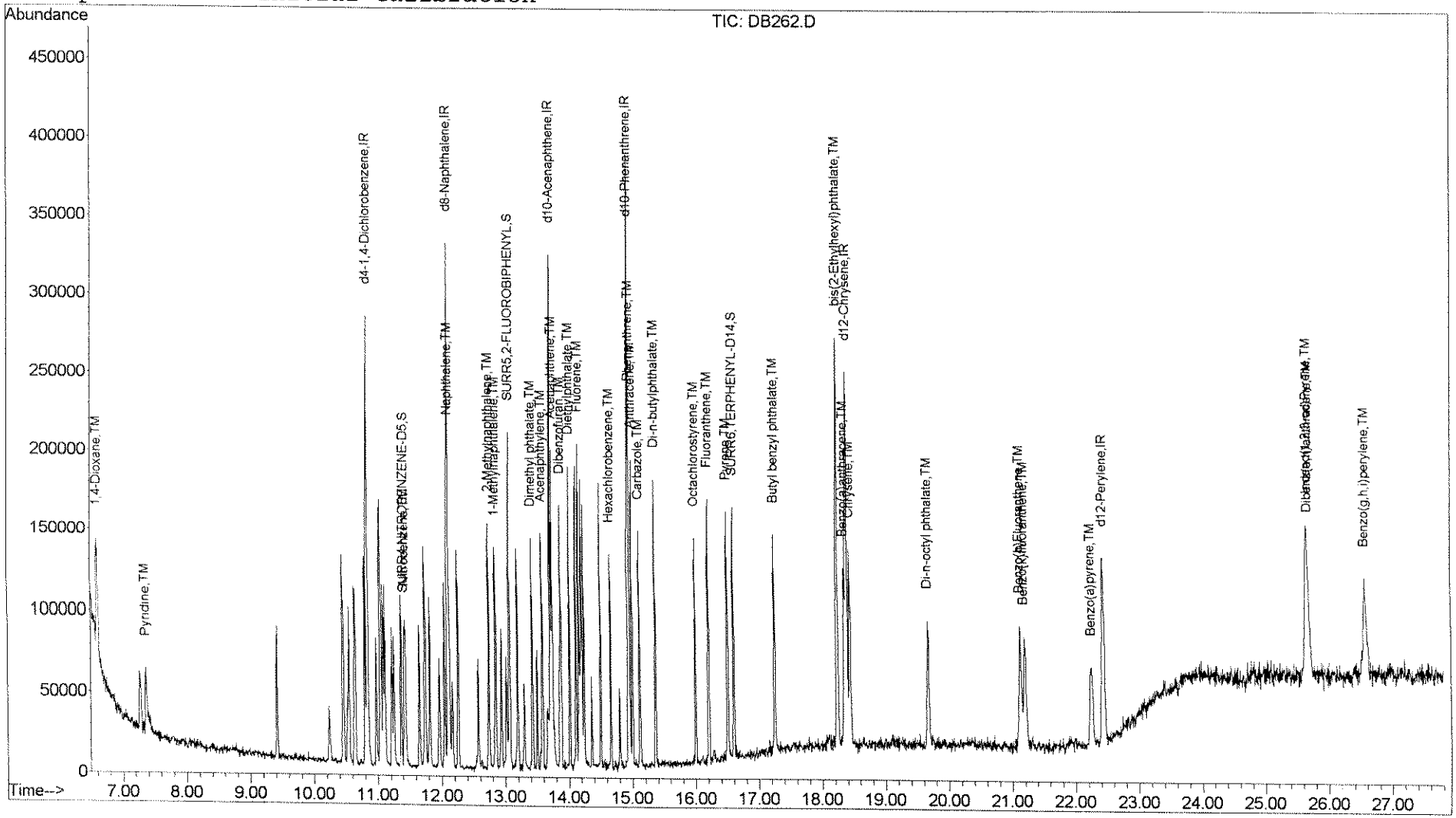
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.19	252	71097	0.46	ppm	98
37)	Benzo(a)pyrene	22.24	252	67461	0.47	ppm	94
38)	Indeno(1,2,3-cd)Pyrene	25.65	276	84966	0.48	ppm	97
39)	Dibenz(a,h)anthracene	25.67	278	70581	0.47	ppm	88
40)	Benzo(g,h,i)perylene	26.57	276	72968	0.52	ppm	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:32 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

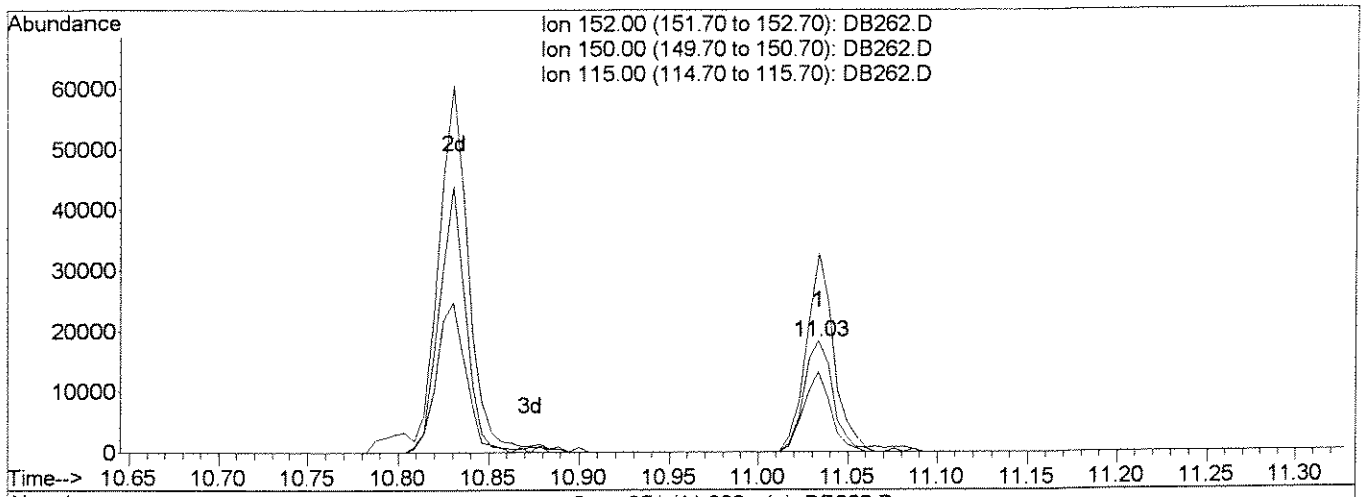


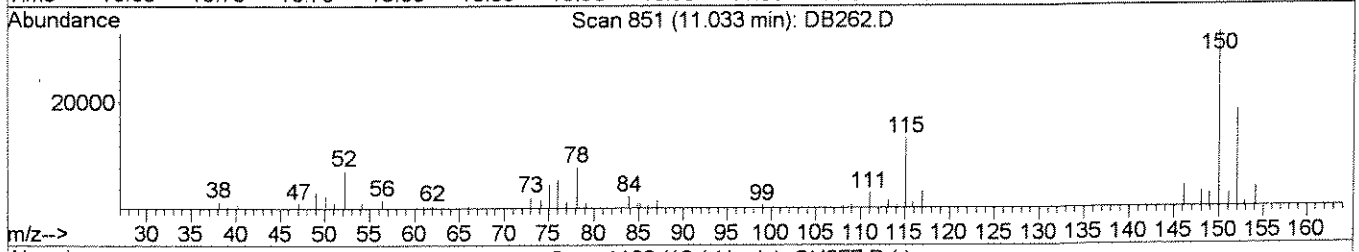
LT 2/20

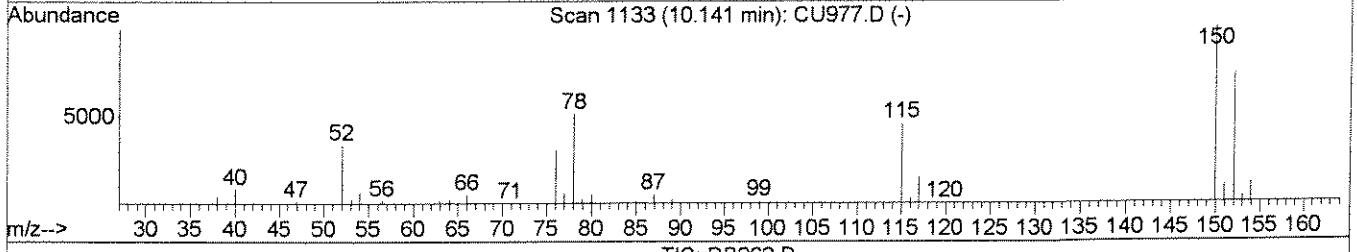
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 15:33 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Multiple Level Calibration







TIC: DB262.D

(1) d4-1,4-Dichlorobenzene (IR)

11.03min 1.00ppm

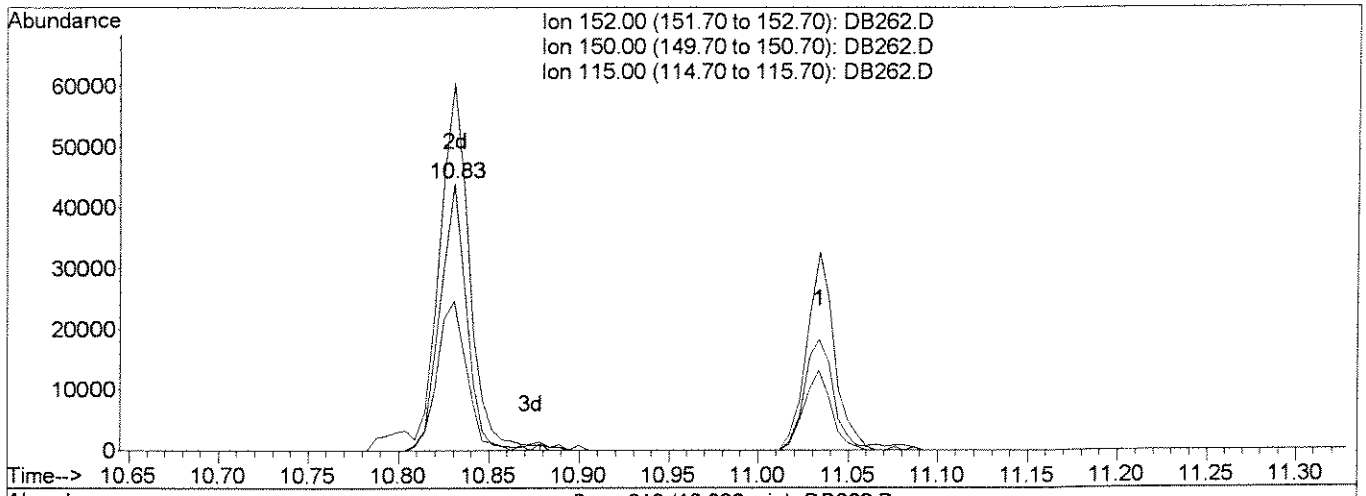
response 20562

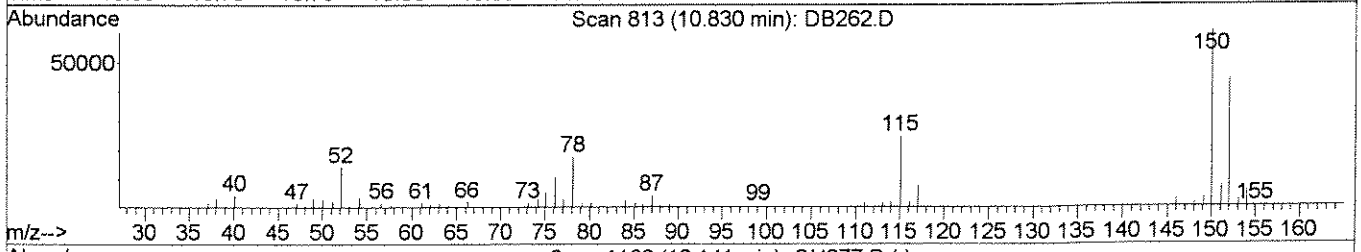
Ion	Exp%	Act%
152.00	100	100
150.00	167.30	178.01
115.00	65.90	72.61
0.00	0.00	0.00

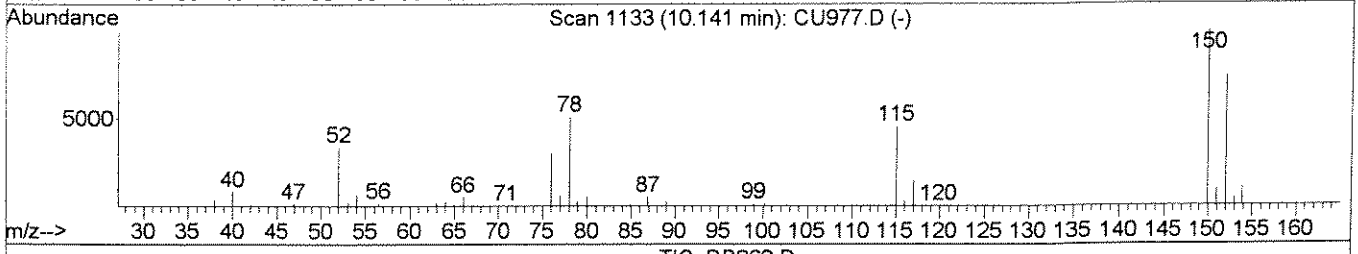
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:30 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Multiple Level Calibration







TIC: DB262.D

(1) d4-1,4-Dichlorobenzene (IR)

10.83min 1.00ppm m

response 45288

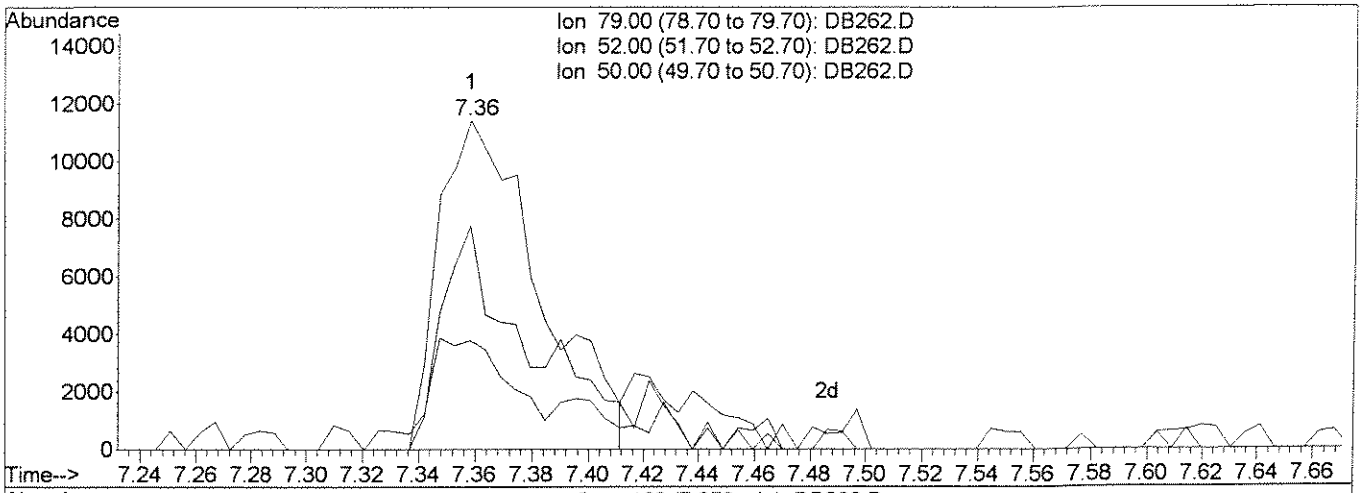
Ion	Exp%	Act%
152.00	100	100
150.00	167.30	137.52
115.00	65.90	56.02
0.00	0.00	0.00

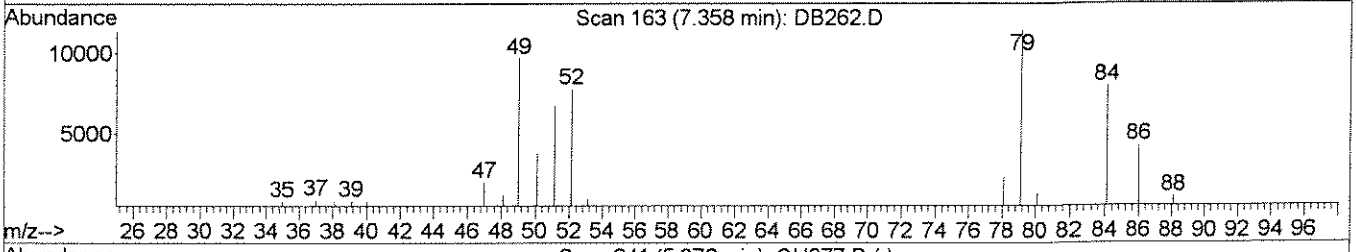
8/20/09

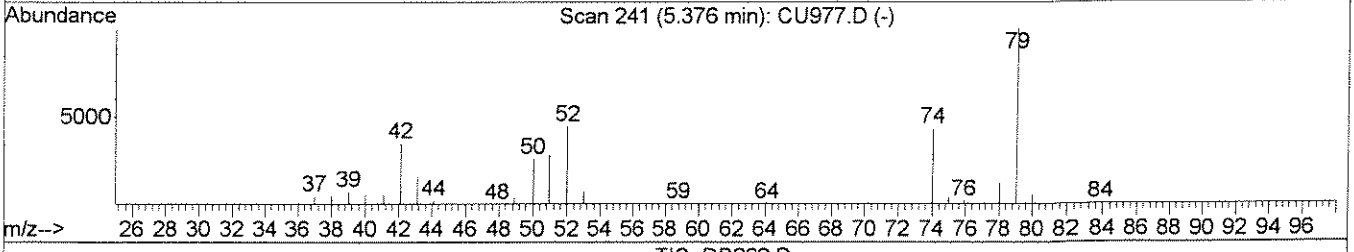
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:30 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Single Level Calibration







TIC: DB262.D

(3) Pyridine (TM)

7.36min 0.45ppm

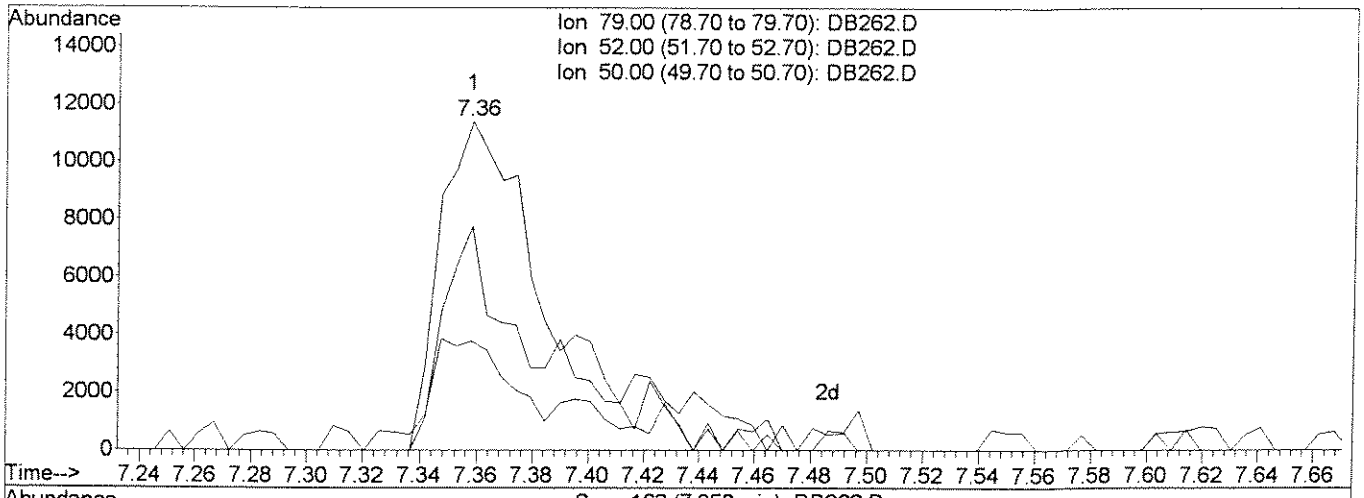
response 28203

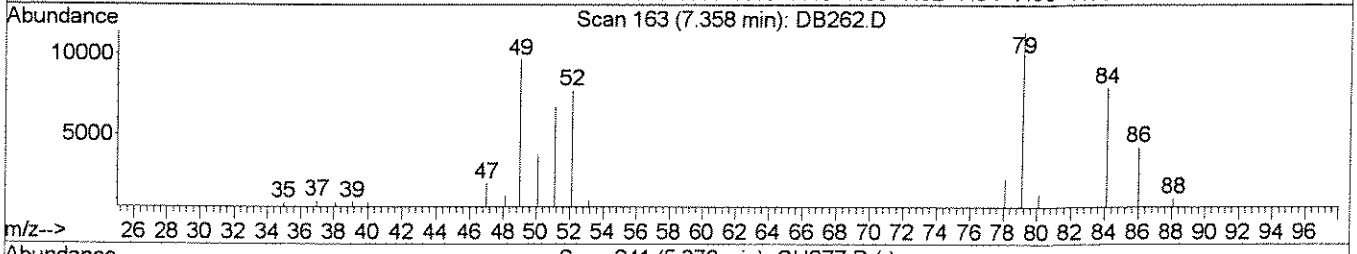
Ion	Exp%	Act%
79.00	100	100
52.00	48.10	65.41
50.00	25.90	29.18
0.00	0.00	0.00

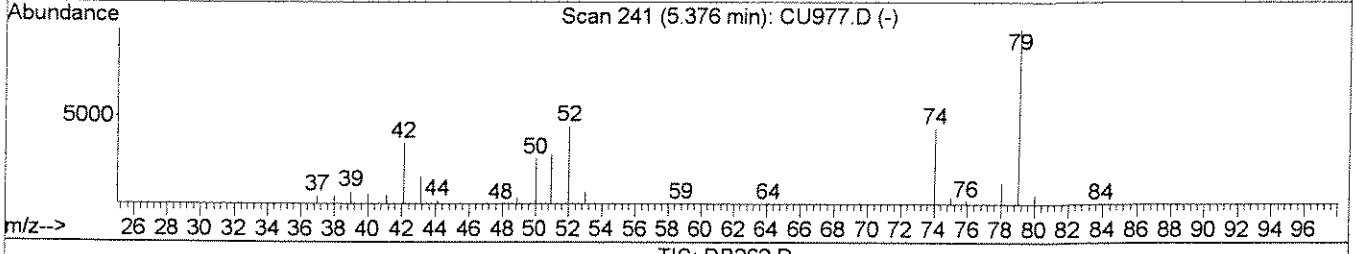
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Single Level Calibration







TIC: DB262.D

(3) Pyridine (TM)

7.36min 0.54ppm m

response 33651

Ion	Exp%	Act%
79.00	100	100
52.00	48.10	67.92
50.00	25.90	33.04
0.00	0.00	0.00

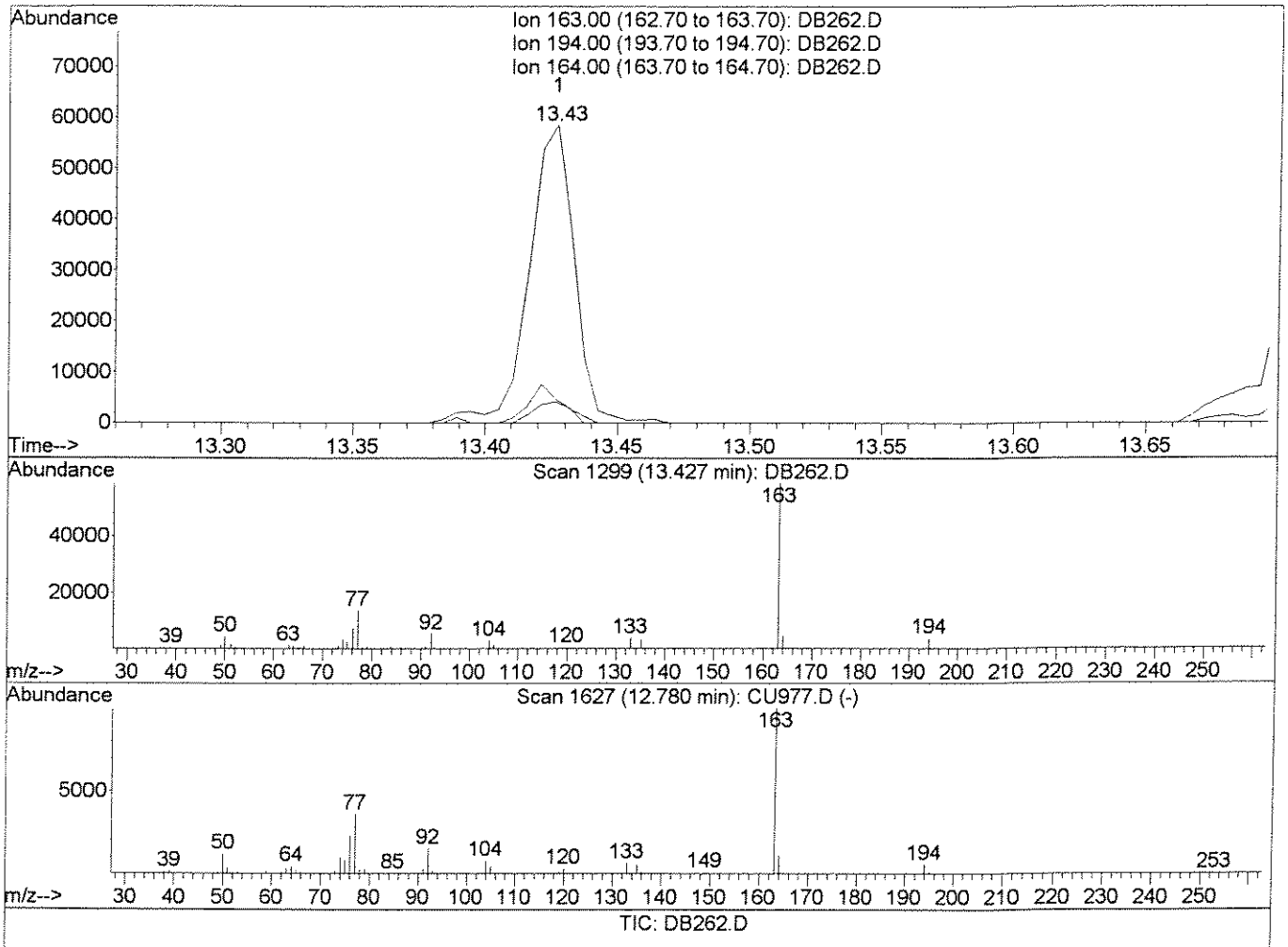
mw ✓

8/20/09

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Multiple Level Calibration



TIC: DB262.D

(13) Dimethyl phthalate (TM)

13.43min 0.49ppm

response 68593

Ion	Exp%	Act%
163.00	100	100
194.00	5.00	7.17#
164.00	10.50	8.02
0.00	0.00	0.00

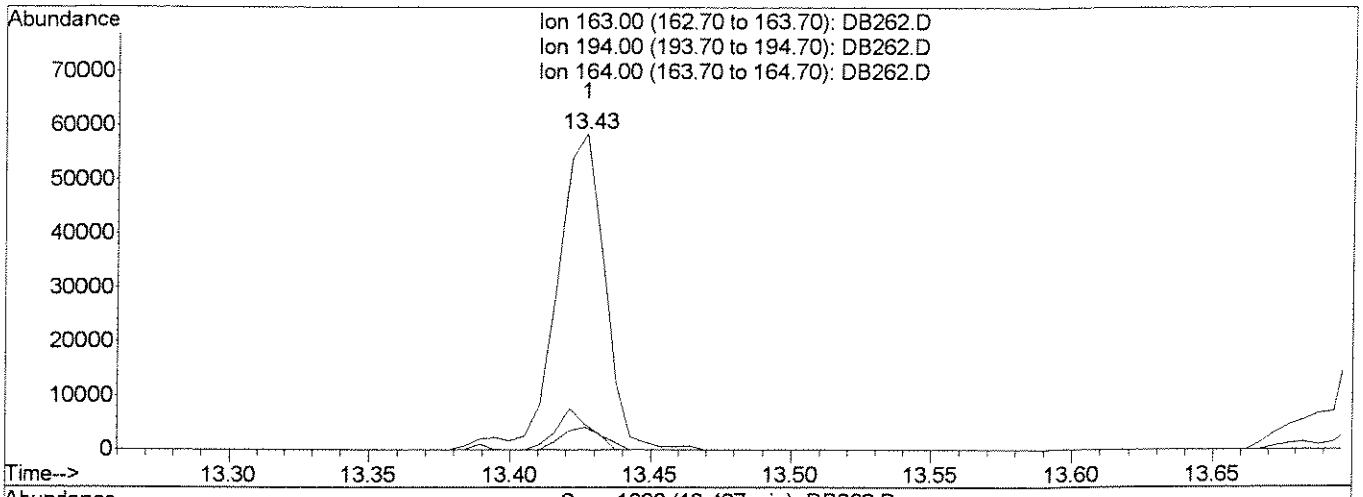
DB262.D LVI0819.M Thu Aug 20 09:31:26 2009

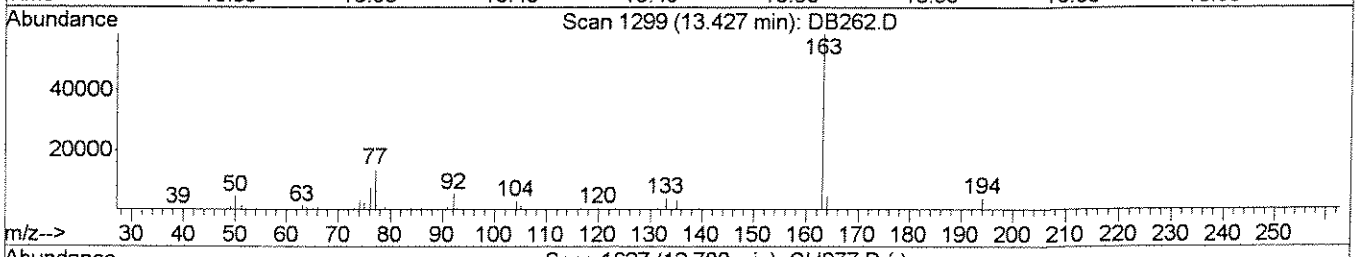
00222

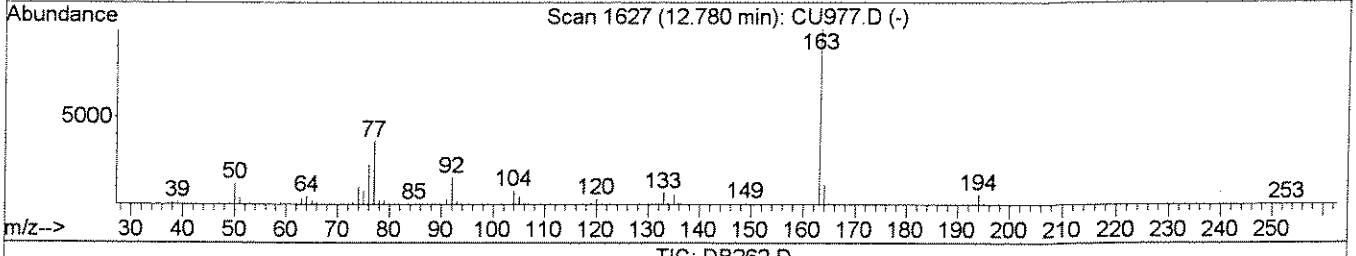
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Multiple Level Calibration







TIC: DB262.D

(13) Dimethyl phthalate (TM)

13.43min 0.49ppm m

response 68586

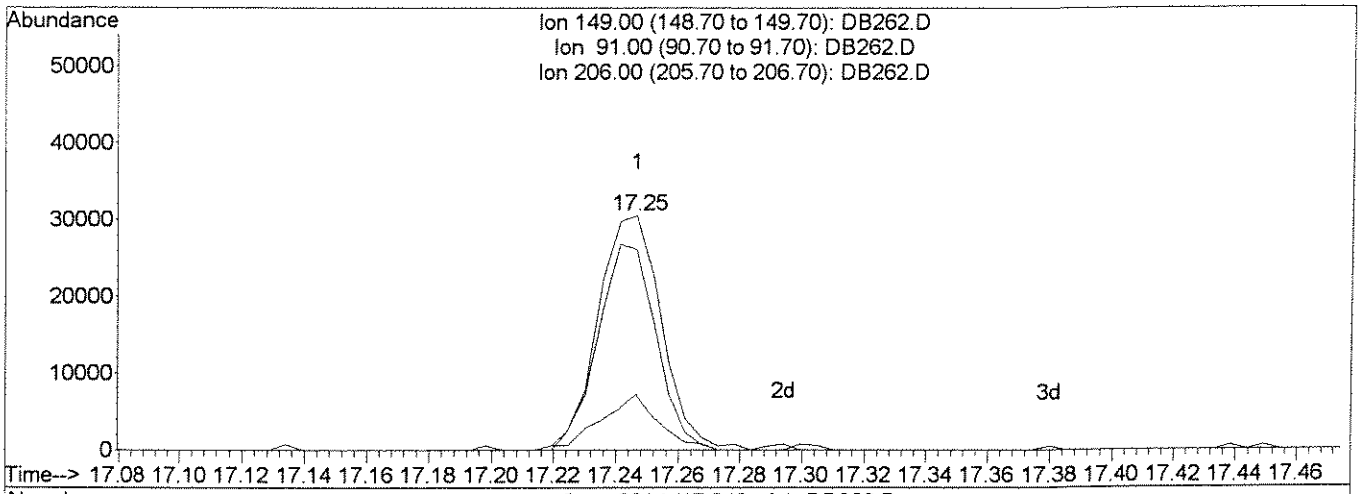
Ion	Exp%	Act%
163.00	100	100
194.00	5.00	7.17#
164.00	10.50	8.02
0.00	0.00	0.00

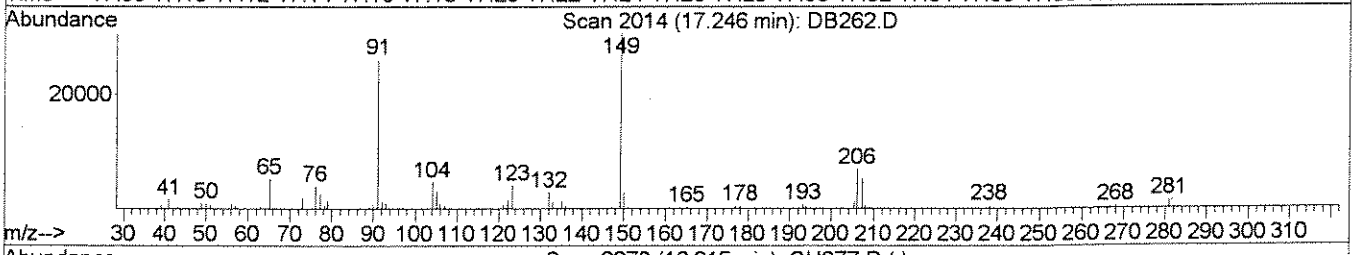
MW 8/20/09

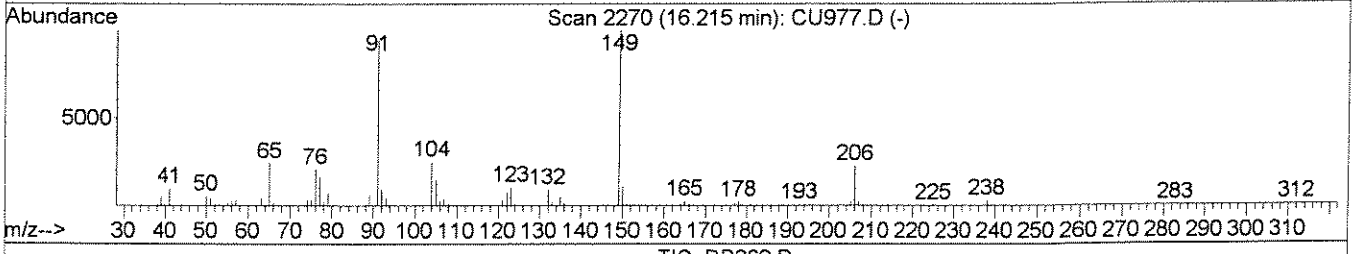
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Multiple Level Calibration







TIC: DB262.D

(29) Butyl benzyl phthalate (TM)

17.25min 0.37ppm

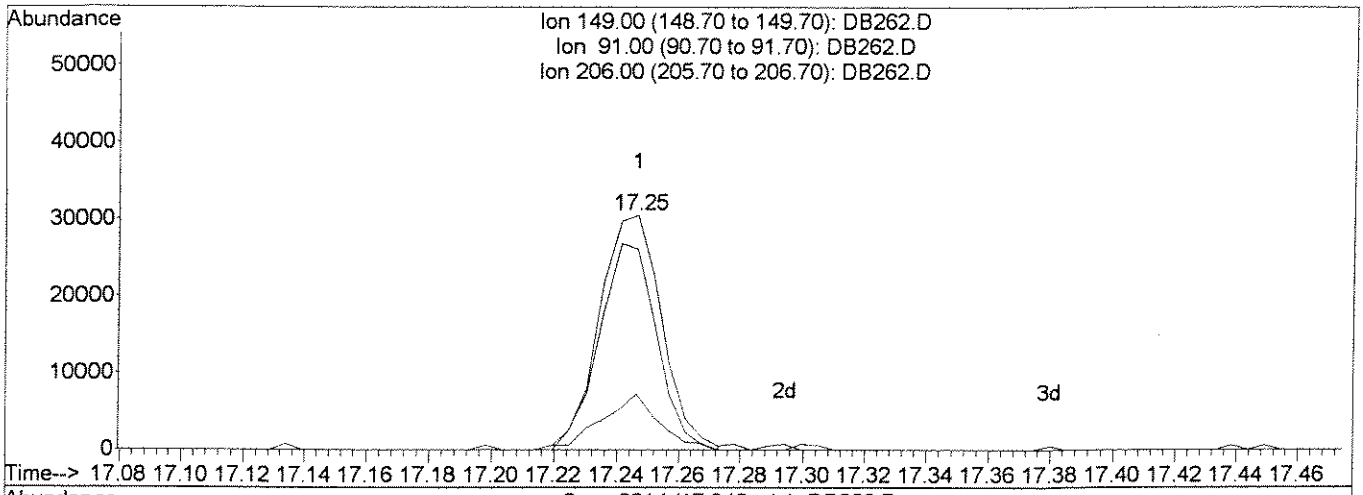
response 42824

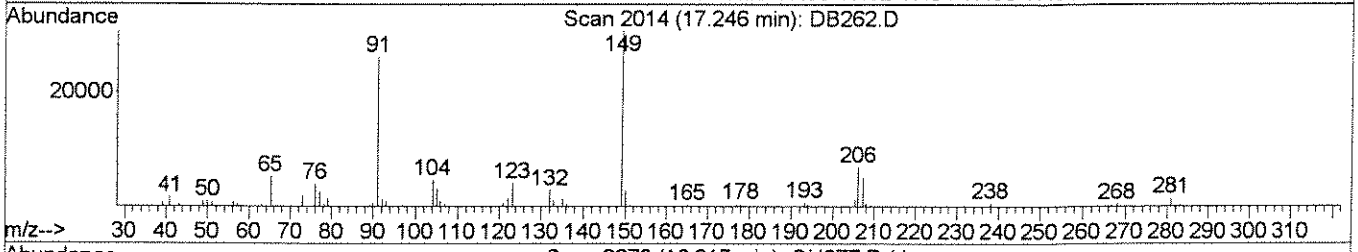
Ion	Exp%	Act%
149.00	100	100
91.00	77.80	85.40
206.00	17.30	23.71#
0.00	0.00	0.00

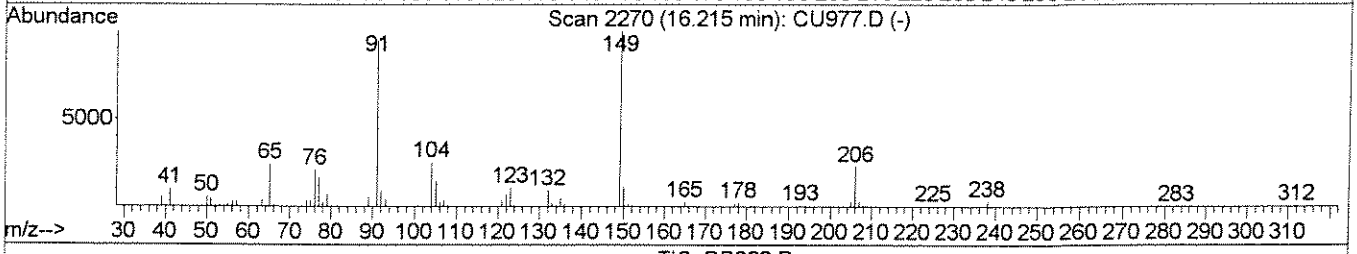
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Multiple Level Calibration







TIC: DB262.D

(29) Butyl benzyl phthalate (TM)

17.25min 0.37ppm m

response 42580

Ion	Exp%	Act%
149.00	100	100
91.00	77.80	85.40
206.00	17.30	23.71#
0.00	0.00	0.00

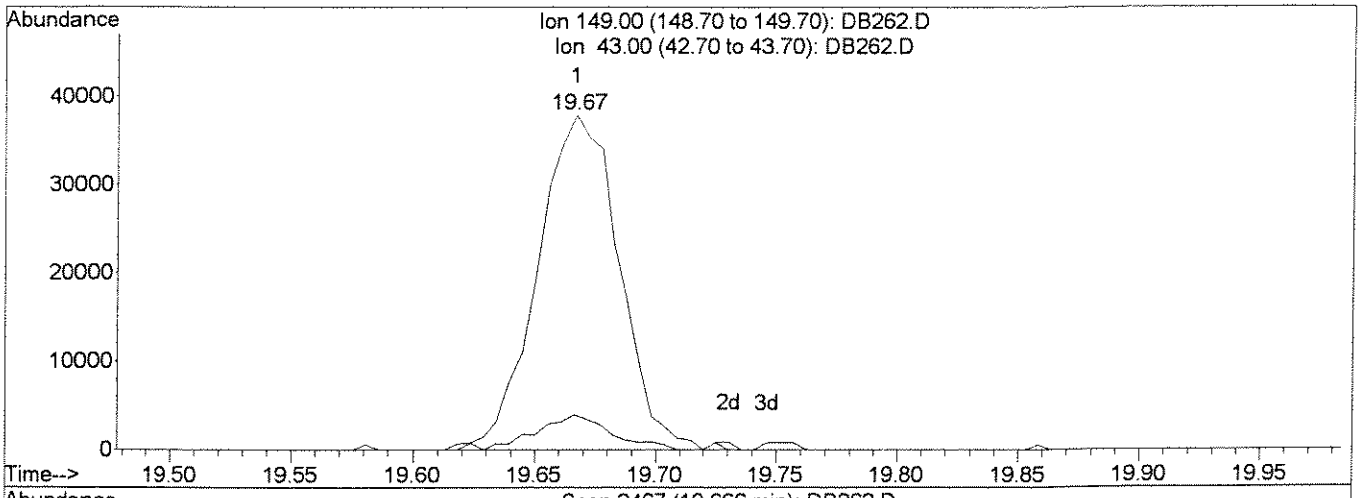
MV 8/20/09

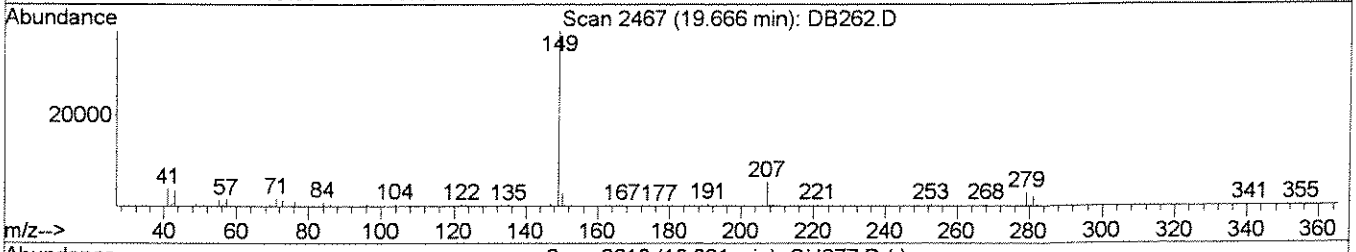
DB262.D LVI0819.M Thu Aug 20 09:31:50 2009

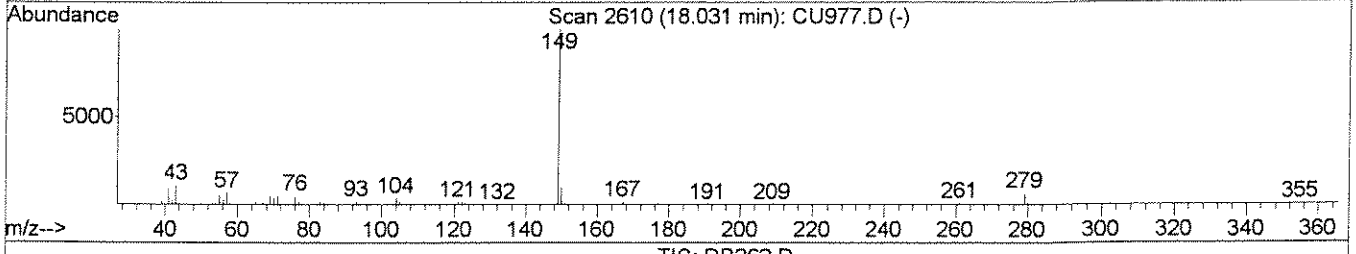
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Single Level Calibration







TIC: DB262.D

(34) Di-n-octyl phthalate (TM)

19.67min 0.61ppm

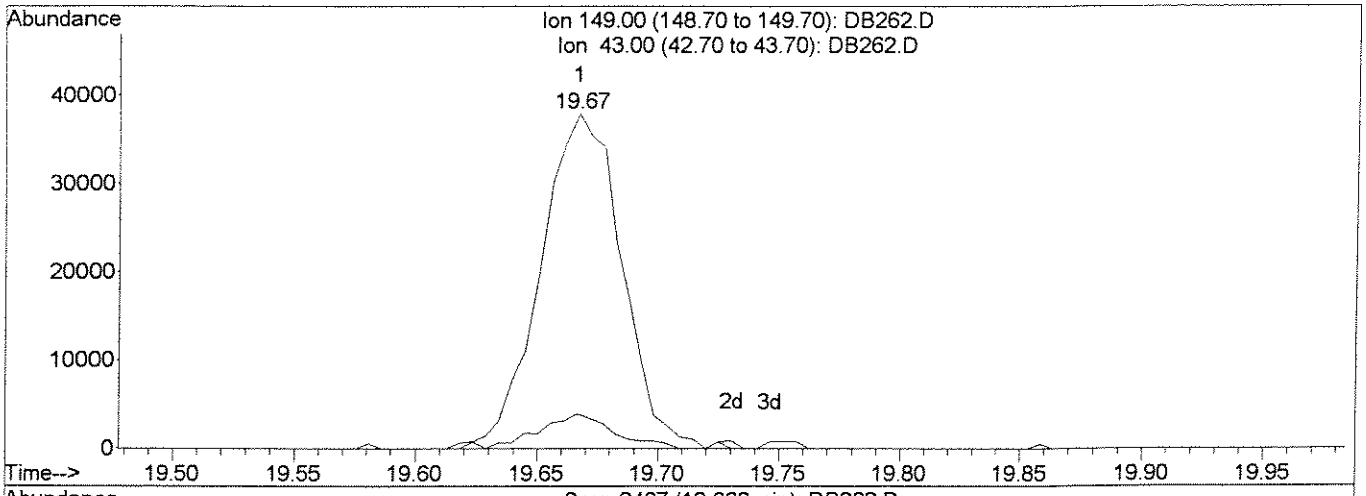
response 88120

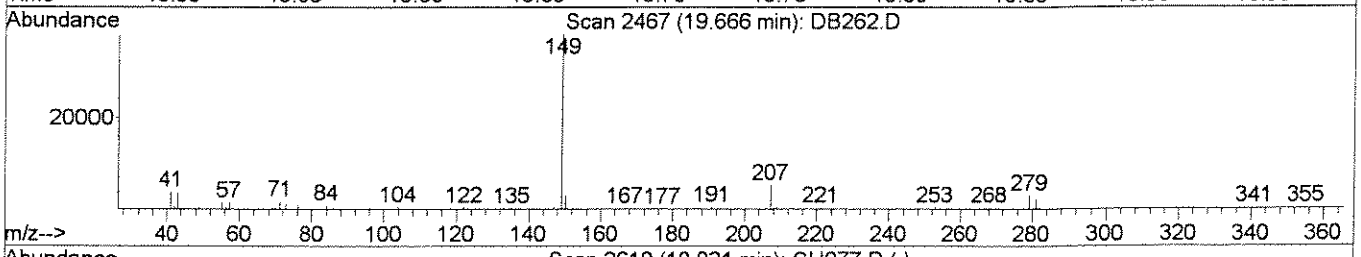
Ion	Exp%	Act%
149.00	100	100
43.00	7.60	10.28#
0.00	0.00	0.00
0.00	0.00	0.00

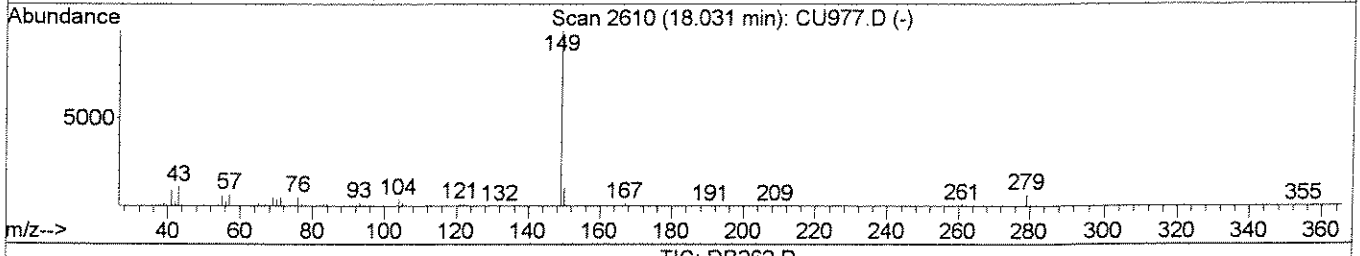
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB262.D Vial: 5
Acq On : 19 Aug 2009 3:05 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:32 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:29:35 2009
Response via : Single Level Calibration







TIC: DB262.D

(34) Di-n-octyl phthalate (TM)

19.67min 0.61ppm m

response 88120

Ion	Exp%	Act%
149.00	100	100
43.00	7.60	10.28#
0.00	0.00	0.00
0.00	0.00	0.00

MW 1/4

D 8/20/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB263.D Vial: 6
Acq On : 19 Aug 2009 3:52 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 16:20 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	42903	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	175221	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	90354	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	149155	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	157137	1.00	ppm	-0.01
33) d12-Perylene	22.43	264	115123	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	69453	1.07	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 53.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	123018	1.04	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 52.00%			
28) SURR6,TERPHENYL-D14	16.60	244	128901	0.96	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 48.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.59	88	91075	1.96	ppm	96
3) Pyridine	7.33	79	65095	1.10	ppm	87
6) Nitrobenzene	11.43	77	69401	1.03	ppm	92
7) Naphthalene	12.11	128	192982	1.05	ppm	95
8) 2-Methylnaphthalene	12.74	142	113313	0.91	ppm	95
9) 1-Methylnaphthalene	12.84	142	109998	0.94	ppm	97
12) Acenaphthylene	13.58	152	170933	1.02	ppm	97
13) Dimethyl phthalate	13.42	163	141645	1.00	ppm	99
14) Acenaphthene	13.74	153	110135	0.99	ppm	97
15) Dibenzofuran	13.88	168	148457	1.01	ppm	96
16) Fluorene	14.16	166	117679	1.00	ppm	96
17) Diethylphthalate	14.01	149	145537	1.03	ppm	96
19) Hexachlorobenzene	14.66	284	36150	1.10	ppm	96
20) Phenanthrene	14.95	178	181297	1.01	ppm	96
21) Anthracene	15.00	178	175395	1.05	ppm	98
22) Carbazole	15.12	167	139505	1.04	ppm	97
23) Octachlorostyrene	16.00	378	8389	1.33	ppm	94
24) Di-n-butylphthalate	15.36	149	224357	0.97	ppm	96
25) Fluoranthene	16.20	202	191644	1.07	ppm	98
27) Pyrene	16.50	202	188431	0.90	ppm	98
29) Butyl benzyl phthalate	17.25	149	101804	0.86	ppm	97
30) bis(2-Ethylhexyl)phthalate	18.23	149	252566	1.59	ppm	98
31) Benzo(a)anthracene	18.35	228	173766	0.98	ppm	95
32) Chrysene	18.44	228	169604	0.99	ppm	93
34) Di-n-octyl phthalate	19.67	149	197486	0.93	ppm	94
35) Benzo(b)Fluoranthene	21.12	252	165868	0.94	ppm	93

(#) = qualifier out of range (m) = manual integration

d0228

Data File : J:\ACQUDATA\5973B\DATA\081909\DB263.D Vial: 6
Acq On : 19 Aug 2009 3:52 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 16:20 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

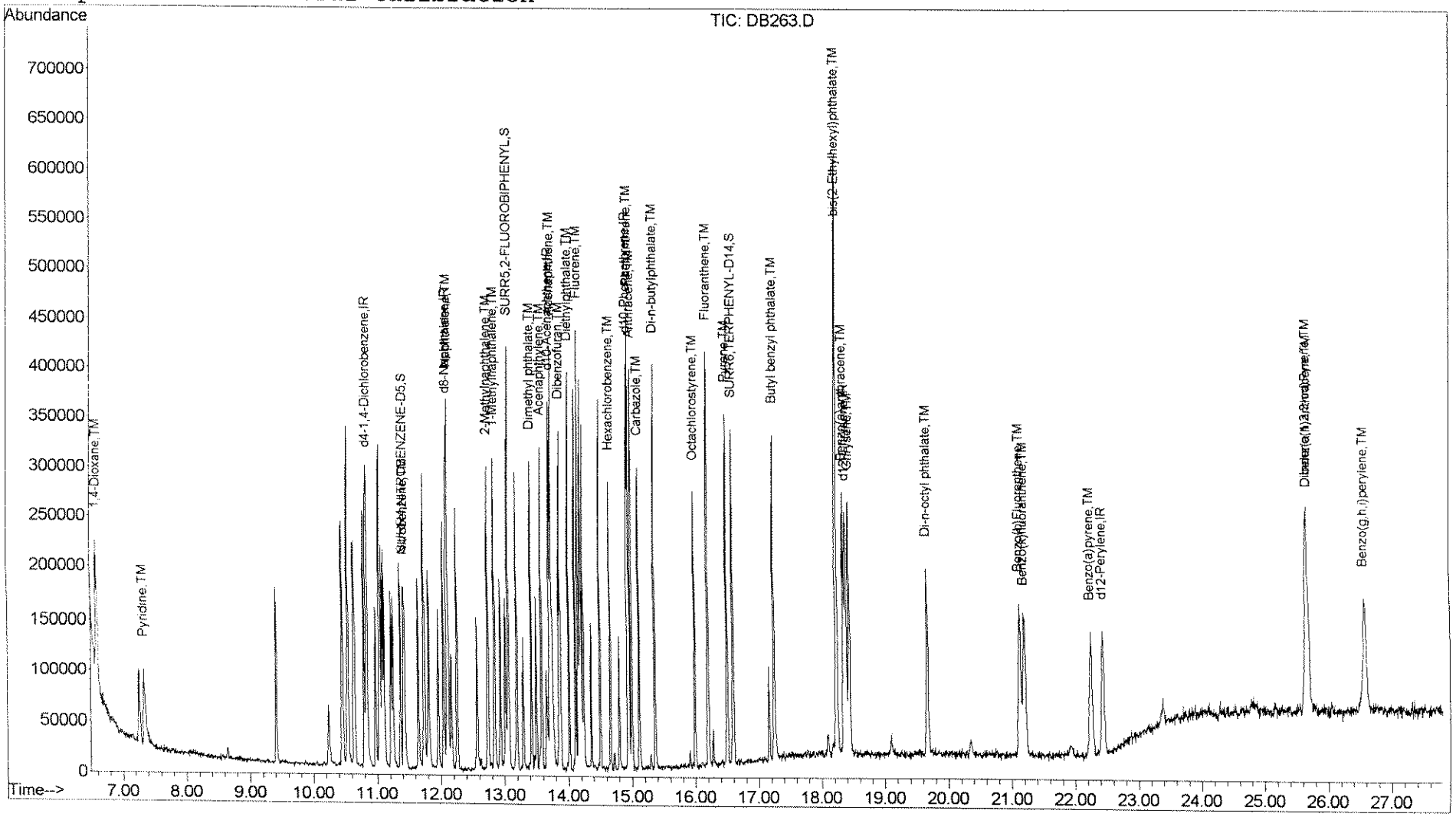
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
36)	Benzo(k)fluoranthene	21.20	252	161298	0.98 ppm	89
37)	Benzo(a)pyrene	22.24	252	144832	0.95 ppm	95
38)	Indeno(1,2,3-cd)Pyrene	25.66	276	184411	0.98 ppm	96
39)	Dibenz(a,h)anthracene	25.67	278	154356	0.97 ppm	84
40)	Benzo(g,h,i)perylene	26.57	276	156011	1.04 ppm	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB263.D Vial: 6
Acq On : 19 Aug 2009 3:52 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 16:20 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB264.D Vial: 7
Acq On : 19 Aug 2009 4:38 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 17:06 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	43134	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	168446	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	91953	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	157649	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	165214	1.00	ppm	-0.01
33) d12-Perylene	22.43	264	117855	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	143031	2.29	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 114.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	256296	2.14	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 107.00%			
28) SURR6,TERPHENYL-D14	16.60	244	270879	1.91	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 95.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.58	88	174893	3.74	ppm	94
3) Pyridine	7.32	79	142500	2.39	ppm	83
6) Nitrobenzene	11.43	77	140985	2.18	ppm	90
7) Naphthalene	12.11	128	396531	2.25	ppm	98
8) 2-Methylnaphthalene	12.74	142	244064	2.05	ppm	97
9) 1-Methylnaphthalene	12.85	142	221925	1.97	ppm	95
12) Acenaphthylene	13.58	152	362474	2.13	ppm	100
13) Dimethyl phthalate	13.42	163	291949	2.02	ppm	98
14) Acenaphthene	13.74	153	226666	2.00	ppm	98
15) Dibenzofuran	13.88	168	303689	2.03	ppm	98
16) Fluorene	14.15	166	246903	2.06	ppm	99
17) Diethylphthalate	14.02	149	305084	2.11	ppm	95
19) Hexachlorobenzene	14.66	284	76348	2.20	ppm	90
20) Phenanthrene	14.96	178	371785	1.96	ppm	96
21) Anthracene	15.00	178	369773	2.10	ppm	95
22) Carbazole	15.12	167	274729	1.94	ppm	99
23) Octachlorostyrene	16.00	378	20538	2.66	ppm	93
24) Di-n-butylphthalate	15.36	149	469483	1.92	ppm	99
25) Fluoranthene	16.20	202	392018	2.08	ppm	98
27) Pyrene	16.50	202	396175	1.80	ppm	98
29) Butyl benzyl phthalate	17.24	149	218831	1.75	ppm	99
30) bis(2-Ethylhexyl)phthalate	18.24	149	544789	3.26	ppm	96
31) Benzo(a)anthracene	18.35	228	371560	1.99	ppm	96
32) Chrysene	18.44	228	358153	1.98	ppm	97
34) Di-n-octyl phthalate	19.67	149	432012	1.63	ppm	94
35) Benzo(b)Fluoranthene	21.12	252	360212	1.99	ppm	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB264.D Vial: 7
Acq On : 19 Aug 2009 4:38 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 17:06 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

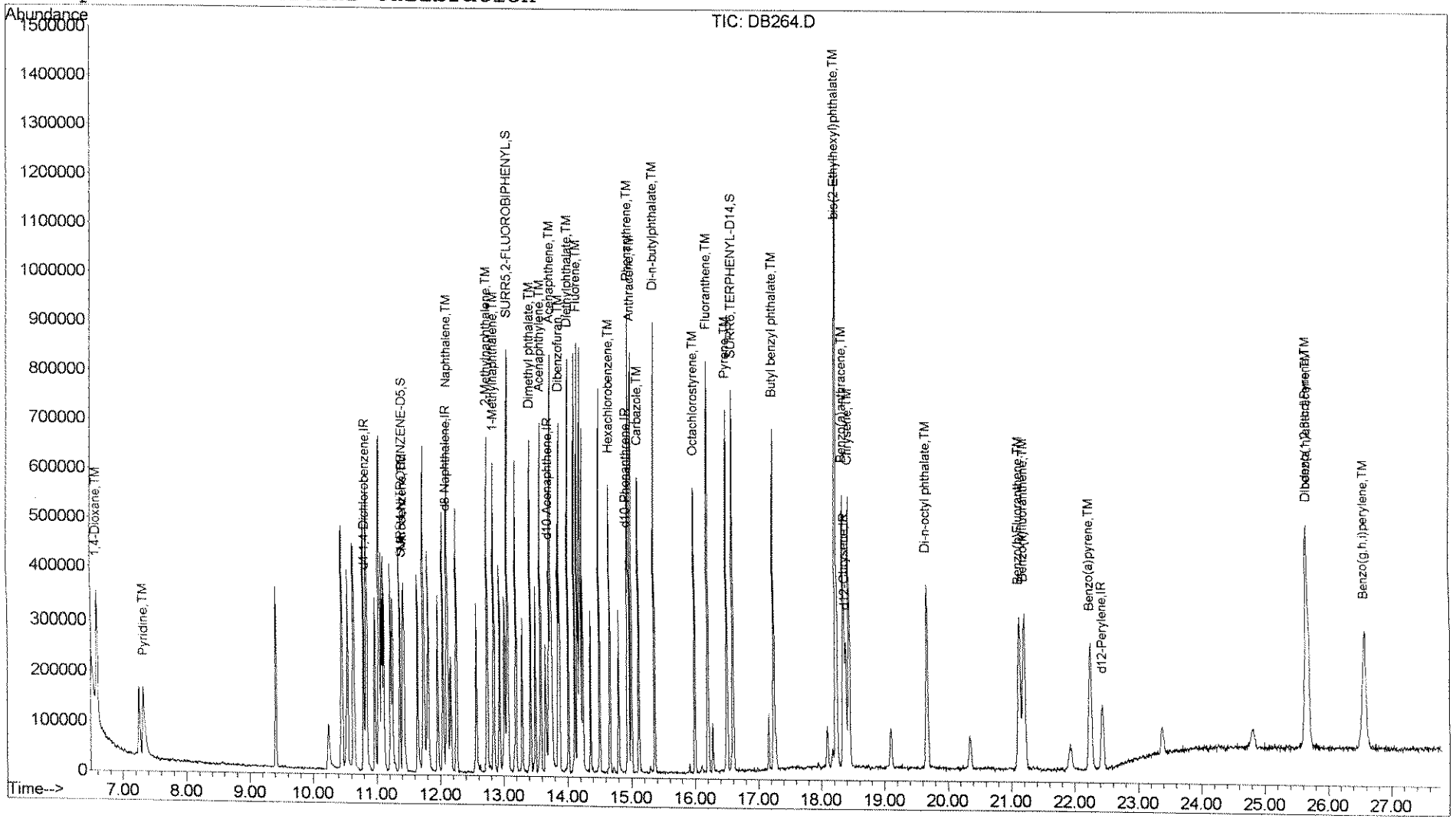
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.20	252	352769	2.09	ppm	94
37)	Benzo(a)pyrene	22.25	252	323460	2.08	ppm	98
38)	Indeno(1,2,3-cd)Pyrene	25.66	276	393432	2.05	ppm	94
39)	Dibenz(a,h)anthracene	25.67	278	328443	2.01	ppm	95
40)	Benzo(g,h,i)perylene	26.58	276	324935	2.12	ppm	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB264.D Vial: 7
Acq On : 19 Aug 2009 4:38 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 17:06 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB265.D Vial: 8
Acq On : 19 Aug 2009 5:22 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 3.0/6.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 17:50 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	42638	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	167835	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	91582	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	157900	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	162771	1.00	ppm	-0.01
33) d12-Perylene	22.44	264	116008	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	206094	3.32	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 166.00%#			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	387603	3.25	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 162.50%#			
28) SURR6,TERPHENYL-D14	16.59	244	409157	2.93	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 146.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.59	88	260828	5.64	ppm	90
3) Pyridine	7.31	79	204604	3.48	ppm	93
6) Nitrobenzene	11.43	77	208442	3.23	ppm	92
7) Naphthalene	12.11	128	573126	3.26	ppm	88
8) 2-Methylnaphthalene	12.74	142	357167	3.01	ppm	99
9) 1-Methylnaphthalene	12.84	142	333789	2.98	ppm	93
12) Acenaphthylene	13.58	152	539134	3.18	ppm	97
13) Dimethyl phthalate	13.42	163	441517	3.07	ppm	98
14) Acenaphthene	13.74	153	344667	3.05	ppm	99
15) Dibenzofuran	13.88	168	467085	3.14	ppm	99
16) Fluorene	14.16	166	363843	3.04	ppm	98
17) Diethylphthalate	14.01	149	457317	3.18	ppm	96
19) Hexachlorobenzene	14.66	284	118243	3.41	ppm	97
20) Phenanthrene	14.95	178	553139	2.92	ppm	98
21) Anthracene	15.00	178	546517	3.10	ppm	98
22) Carbazole	15.12	167	376853	2.65	ppm	97
23) Octachlorostyrene	16.00	378	29829	3.71	ppm	79
24) Di-n-butylphthalate	15.36	149	710546	2.90	ppm	96
25) Fluoranthene	16.20	202	587473	3.11	ppm	99
27) Pyrene	16.50	202	614864	2.84	ppm	97
29) Butyl benzyl phthalate	17.24	149	321139	2.61	ppm	97
30) bis(2-Ethylhexyl)phthalate	18.23	149	828919	5.04	ppm	97
31) Benzo(a)anthracene	18.35	228	553037	3.00	ppm	95
32) Chrysene	18.44	228	540819	3.04	ppm	95
34) Di-n-octyl phthalate	19.67	149	676497	2.41	ppm	95
35) Benzo(b)Fluoranthene	21.13	252	529217	2.97	ppm	94

(#) = qualifier out of range (m) = manual integration

00234

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB265.D Vial: 8
Acq On : 19 Aug 2009 5:22 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 3.0/6.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 17:50 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Wed Aug 19 12:30:23 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

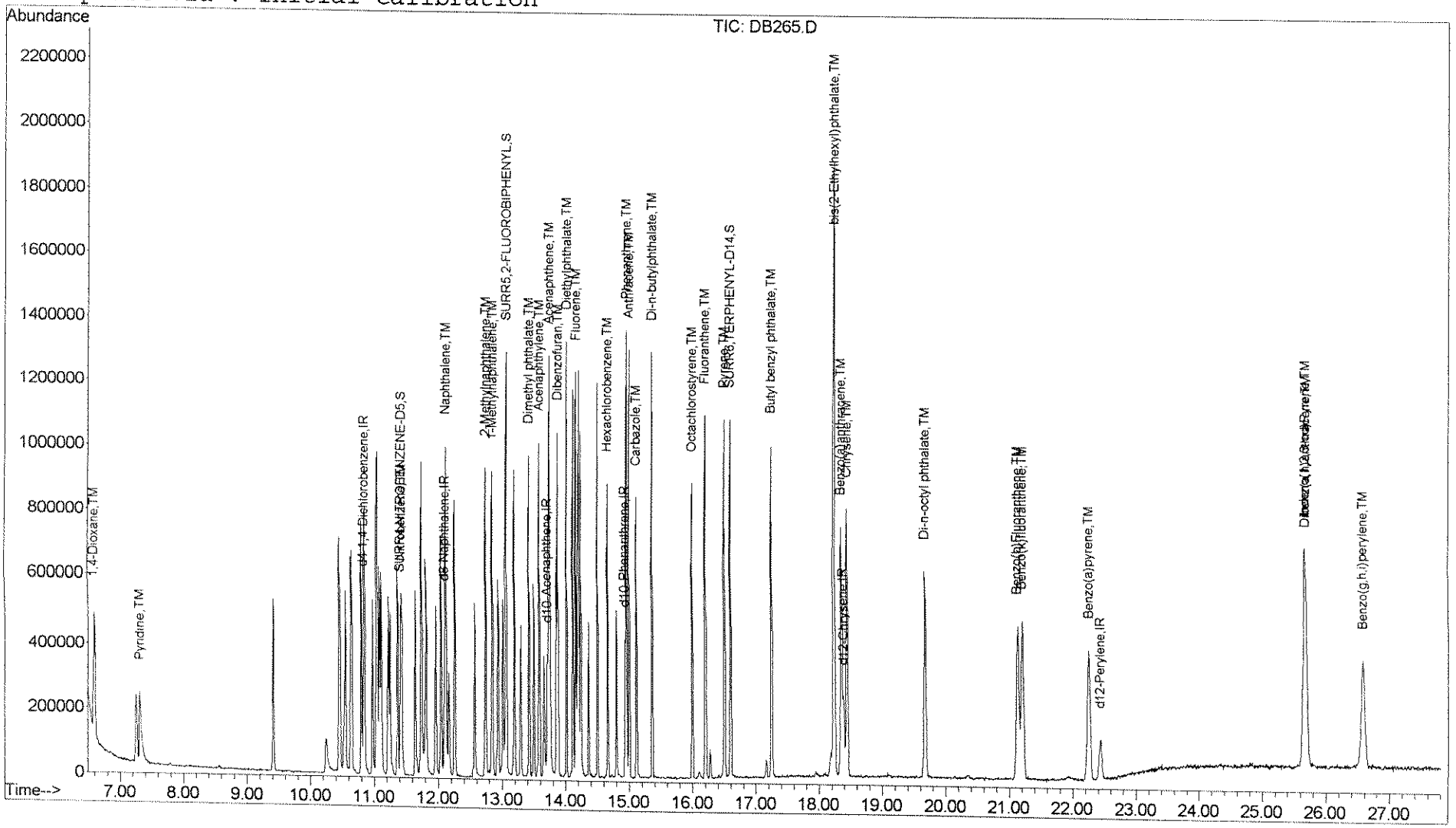
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.20	252	541323	3.25	ppm	99
37)	Benzo(a)pyrene	22.25	252	494709	3.24	ppm	95
38)	Indeno(1,2,3-cd)Pyrene	25.66	276	589967	3.12	ppm	99
39)	Dibenz(a,h)anthracene	25.68	278	496192	3.08	ppm	93
40)	Benzo(g,h,i)perylene	26.57	276	466794	3.09	ppm	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB265.D Vial: 8
Acq On : 19 Aug 2009 5:22 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 3.0/6.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 17:50 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



DB265.D LVI0819.M Thu Aug 20 10:09:13 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB266.D Vial: 9
Acq On : 19 Aug 2009 6:06 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 4.0/8.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:37 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:37:32 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	47878	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	188059	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	101718	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	173589	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	182574	1.00	ppm	0.00
33) d12-Perylene	22.43	264	132746	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	305841	4.09	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 204.50%#			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	571134	4.17	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 208.50%#			
28) SURR6,TERPHENYL-D14	16.60	244	610593	3.98	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 199.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.59	88	382356	7.70	ppm	98
3) Pyridine	7.30	79	301535	4.19	ppm	97
6) Nitrobenzene	11.43	77	297702	3.98	ppm	99
7) Naphthalene	12.11	128	843996	4.03	ppm	97
8) 2-Methylnaphthalene	12.74	142	525967	4.05	ppm	98
9) 1-Methylnaphthalene	12.84	142	478271	3.85	ppm	99
12) Acenaphthylene	13.58	152	807552	4.18	ppm	98
13) Dimethyl phthalate	13.42	163	663736	4.15	ppm	99
14) Acenaphthene	13.74	153	492460	3.91	ppm	99
15) Dibenzofuran	13.88	168	693582	4.17	ppm	97
16) Fluorene	14.16	166	548712	4.20	ppm	99
17) Diethylphthalate	14.01	149	665903	4.11	ppm	99
19) Hexachlorobenzene	14.67	284	177565	4.33	ppm	91
20) Phenanthrene	14.95	178	822592	4.05	ppm	99
21) Anthracene	15.00	178	816125	4.13	ppm	96
22) Carbazole	15.12	167	509449	3.70	ppm	97
23) Octachlorostyrene	16.00	378	45193	4.76	ppm	91
24) Di-n-butylphthalate	15.36	149	1049100	3.95	ppm	98
25) Fluoranthene	16.20	202	871601	4.20	ppm	99
27) Pyrene	16.50	202	898361	3.95	ppm	98
29) Butyl benzyl phthalate	17.25	149	491390	3.84	ppm	97
30) bis(2-Ethylhexyl)phthalate	18.23	149	1287498	7.62	ppm	98
31) Benzo(a)anthracene	18.35	228	821306	4.07	ppm	99
32) Chrysene	18.44	228	795379	4.00	ppm	98
34) Di-n-octyl phthalate	19.67	149	1039537	3.27	ppm	97
35) Benzo(b)Fluoranthene	21.14	252	800315	3.91	ppm	95

(#) = qualifier out of range (m) = manual integration

Data File : J:\ACQUDATA\5973B\DATA\081909\DB266.D Vial: 9
Acq On : 19 Aug 2009 6:06 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 4.0/8.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:37 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:37:32 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

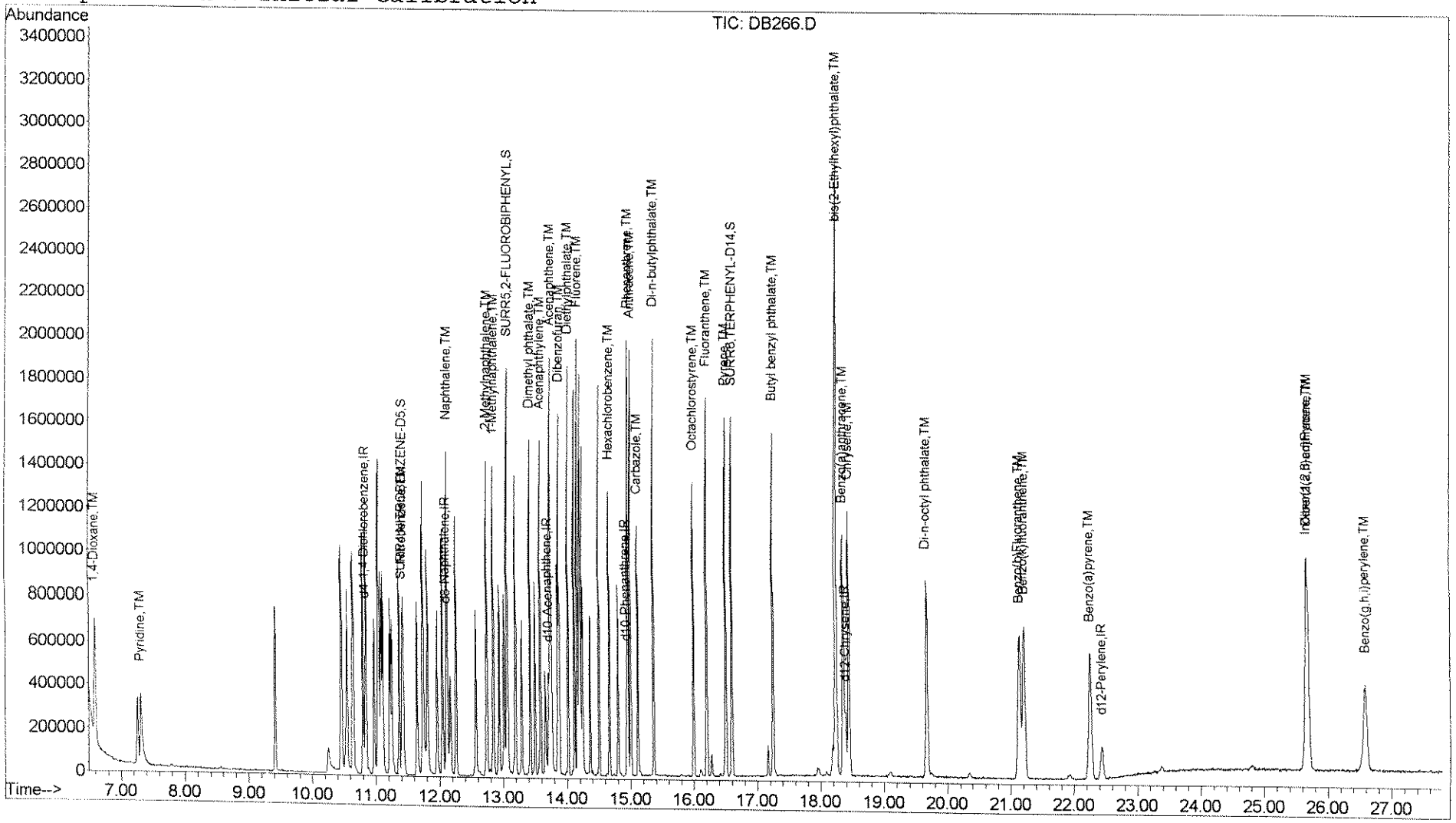
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.21	252	766848	3.92	ppm	95
37)	Benzo(a)pyrene	22.25	252	738709	4.13	ppm	95
38)	Indeno(1,2,3-cd)Pyrene	25.66	276	857761	3.97	ppm	91
39)	Dibenz(a,h)anthracene	25.68	278	738486	4.01	ppm	98
40)	Benzo(g,h,i)perylene	26.58	276	593101	3.42	ppm	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB266.D Vial: 9
Acq On : 19 Aug 2009 6:06 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 4.0/8.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:37 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB267.D Vial: 10
Acq On : 19 Aug 2009 6:48 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 5.0/10.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:38 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:38:50 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	48243	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	184207	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	101855	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	176845	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	177924	1.00	ppm	0.00
33) d12-Perylene	22.43	264	130165	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	372950	5.07	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 253.50%#			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	692737	5.04	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 252.00%#			
28) SURR6,TERPHENYL-D14	16.60	244	770285	5.15	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 257.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.59	88	459640	9.21	ppm	96
3) Pyridine	7.31	79	368844	5.04	ppm	94
6) Nitrobenzene	11.43	77	369053	5.02	ppm	96
7) Naphthalene	12.11	128	1035060	5.03	ppm	95
8) 2-Methylnaphthalene	12.74	142	635187	5.00	ppm	97
9) 1-Methylnaphthalene	12.84	142	598621	4.94	ppm	98
12) Acenaphthylene	13.58	152	1006347	5.19	ppm	98
13) Dimethyl phthalate	13.42	163	835385	5.21	ppm	97
14) Acenaphthene	13.74	153	612347	4.88	ppm	99
15) Dibenzofuran	13.88	168	871397	5.22	ppm	100
16) Fluorene	14.16	166	676405	5.17	ppm	99
17) Diethylphthalate	14.01	149	836110	5.16	ppm	98
19) Hexachlorobenzene	14.67	284	224685	5.35	ppm	90
20) Phenanthrene	14.96	178	1008896	4.89	ppm	99
21) Anthracene	15.00	178	1014383	5.04	ppm	96
22) Carbazole	15.12	167	606833	4.39	ppm	98
23) Octachlorostyrene	16.00	378	56011	5.61	ppm	82
24) Di-n-butylphthalate	15.36	149	1311138	4.91	ppm	98
25) Fluoranthene	16.21	202	1087623	5.14	ppm	100
27) Pyrene	16.50	202	1122730	5.09	ppm	98
29) Butyl benzyl phthalate	17.25	149	608024	4.95	ppm	93
30) bis(2-Ethylhexyl)phthalate	18.24	149	1589574	9.83	ppm	99
31) Benzo(a)anthracene	18.35	228	1036867	5.26	ppm	100
32) Chrysene	18.44	228	989759	5.11	ppm	98
34) Di-n-octyl phthalate	19.67	149	1301247	4.15	ppm	97
35) Benzo(b)Fluoranthene	21.14	252	993942	4.99	ppm	97

(#) = qualifier out of range (m) = manual integration

00240

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB267.D Vial: 10
Acq On : 19 Aug 2009 6:48 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 5.0/10.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:38 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:38:50 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

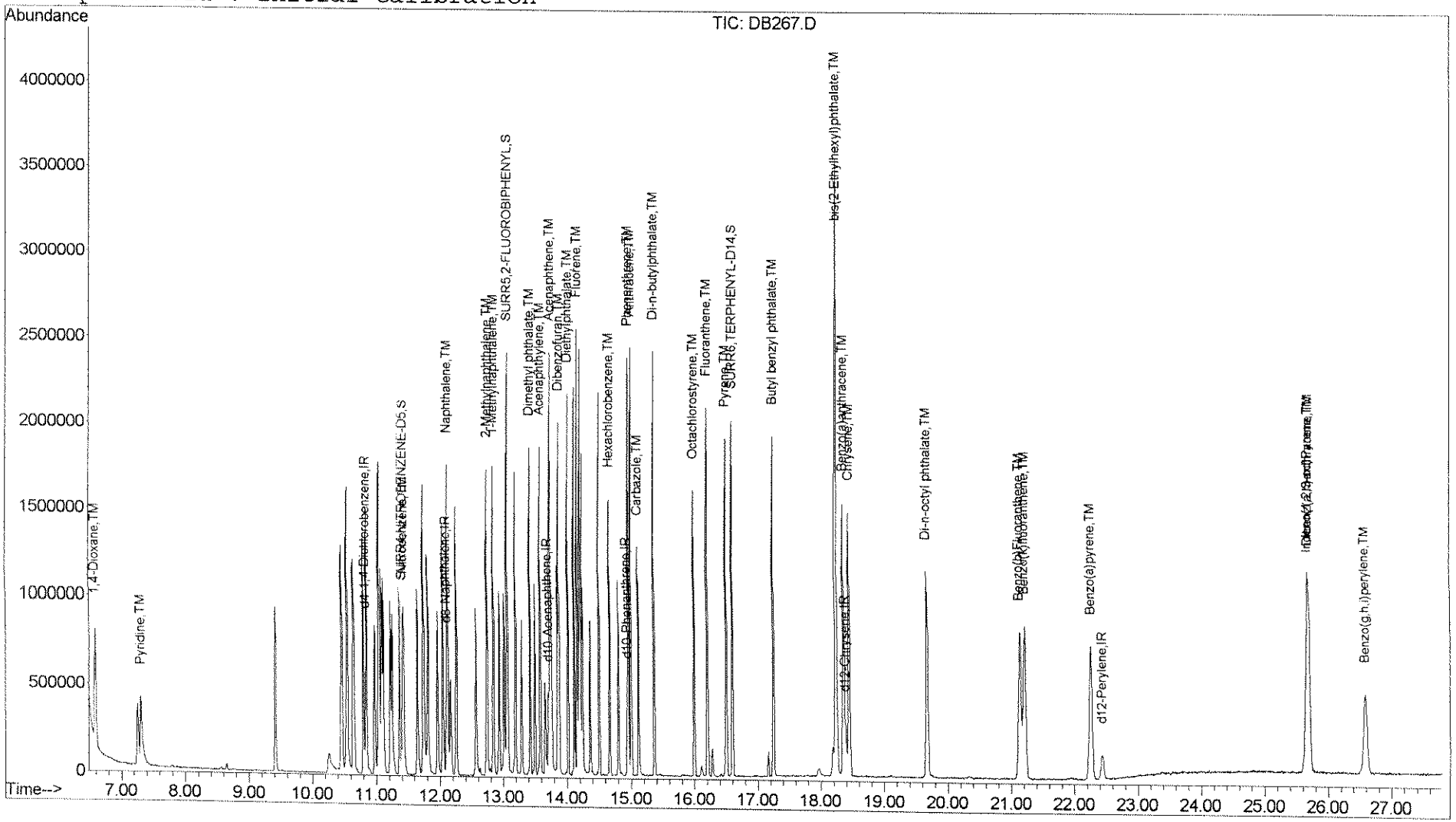
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.21	252	990222	5.20	ppm	96
37)	Benzo(a)pyrene	22.26	252	929331	5.30	ppm	98
38)	Indeno(1,2,3-cd)Pyrene	25.67	276	1014418	4.82	ppm	97
39)	Dibenz(a,h)anthracene	25.69	278	904296	5.04	ppm	93
40)	Benzo(g,h,i)perylene	26.58	276	664289	3.99	ppm	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB267.D Vial: 10
Acq On : 19 Aug 2009 6:48 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 5.0/10.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:38 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



DB267.D LVI0819.M Thu Aug 20 10:09:27 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB268.D Vial: 11
Acq On : 19 Aug 2009 7:29 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:40 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:40:09 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	49191m	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	187701	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	105915	1.00	ppm	0.00
18) d10-Phenanthrene	14.94	188	177553	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	191170	1.00	ppm	0.00
33) d12-Perylene	22.44	264	133254	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	766642	10.14	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 507.00%#			
11) SURR5,2-FLUOROBIPHENYL	13.07	172	1510931	10.49	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 524.50%#			
28) SURR6,TERPHENYL-D14	16.60	244	1686244	10.54	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 527.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.59	88	892642	17.73	ppm	99
3) Pyridine	7.30	79	729521	9.68	ppm	97
6) Nitrobenzene	11.43	77	736300	9.79	ppm	100
7) Naphthalene	12.11	128	2126617	10.05	ppm	86
8) 2-Methylnaphthalene	12.74	142	1316835	10.22	ppm	97
9) 1-Methylnaphthalene	12.85	142	1241092	10.12	ppm	100
12) Acenaphthylene	13.58	152	2199784	10.84	ppm	98
13) Dimethyl phthalate	13.43	163	1792471	10.69	ppm	98
14) Acenaphthene	13.74	153	1357164	10.42	ppm	97
15) Dibenzofuran	13.88	168	1889320	10.82	ppm	97
16) Fluorene	14.16	166	1477972	10.82	ppm	99
17) Diethylphthalate	14.02	149	1780132	10.52	ppm	99
19) Hexachlorobenzene	14.67	284	502306	11.83	ppm	86
20) Phenanthrene	14.96	178	2146355	10.43	ppm	98
21) Anthracene	15.00	178	2152856	10.72	ppm	96
22) Carbazole	15.12	167	924744	6.70	ppm	98
23) Octachlorostyrene	16.00	378	130293	12.91	ppm	85
24) Di-n-butylphthalate	15.36	149	2747732	10.43	ppm	97
25) Fluoranthene	16.21	202	2341112	11.05	ppm	99
27) Pyrene	16.51	202	2395969	10.24	ppm	98
29) Butyl benzyl phthalate	17.25	149	1304547	10.21	ppm	95
30) bis(2-Ethylhexyl)phthalate	18.24	149	3403400	20.30	ppm	96
31) Benzo(a)anthracene	18.36	228	2203864	10.44	ppm	99
32) Chrysene	18.45	228	2138240	10.32	ppm	99
34) Di-n-octyl phthalate	19.67	149	2873783	8.50	ppm	97
35) Benzo(b)Fluoranthene	21.15	252	2251711	11.13	ppm	98

(#) = qualifier out of range (m) = manual integration

00243

Data File : J:\ACQUDATA\5973B\DATA\081909\DB268.D Vial: 11
Acq On : 19 Aug 2009 7:29 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:40 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:40:09 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

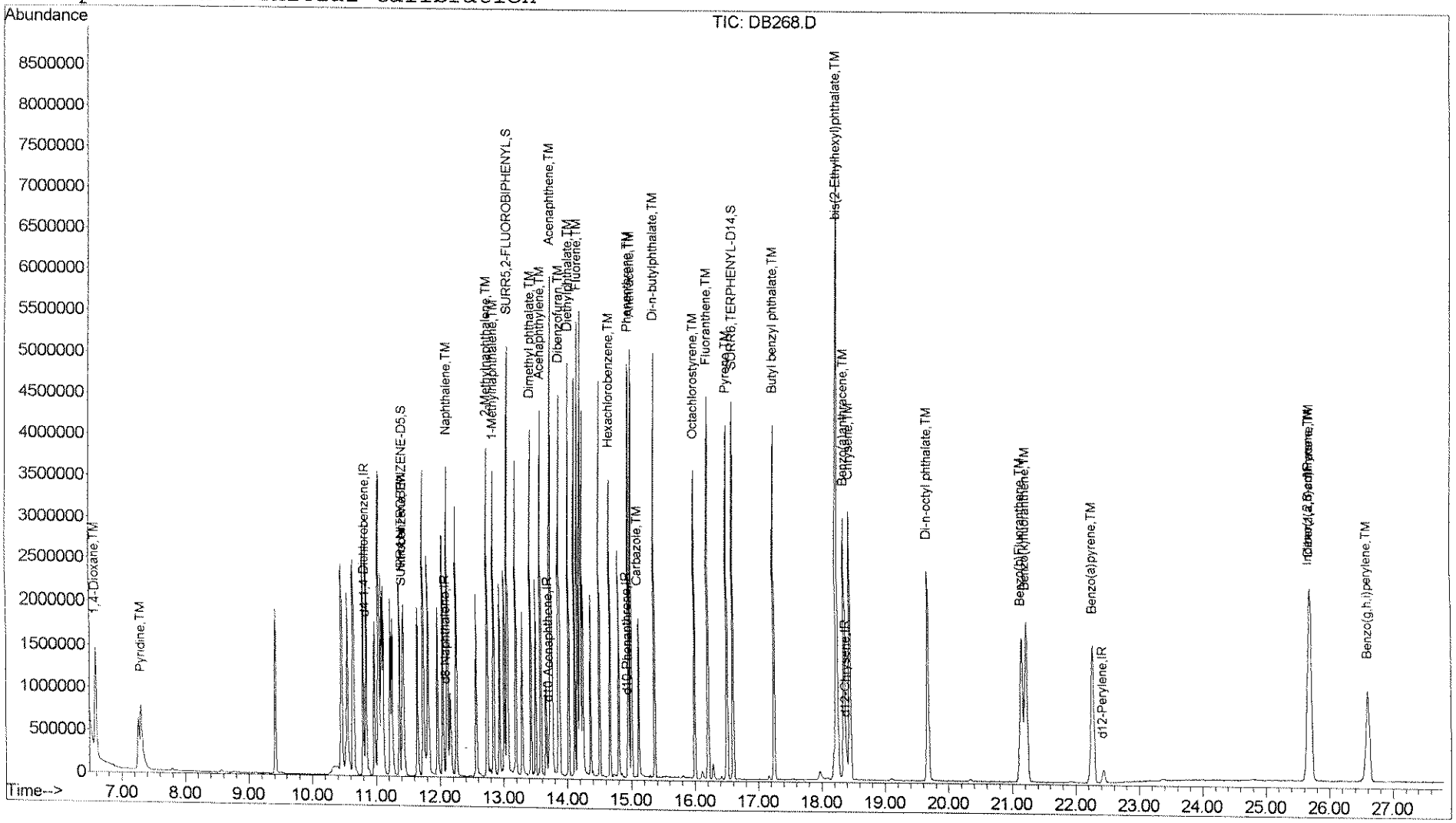
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.22	252	2101729	10.79	ppm	94
37)	Benzo(a)pyrene	22.27	252	2011928	11.24	ppm	95
38)	Indeno(1,2,3-cd)Pyrene	25.69	276	2104042	9.87	ppm	96
39)	Dibenz(a,h)anthracene	25.71	278	1845105	10.13	ppm	98
40)	Benzo(g,h,i)perylene	26.60	276	1599598	9.54	ppm	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB268.D Vial: 11
Acq On : 19 Aug 2009 7:29 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:40 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

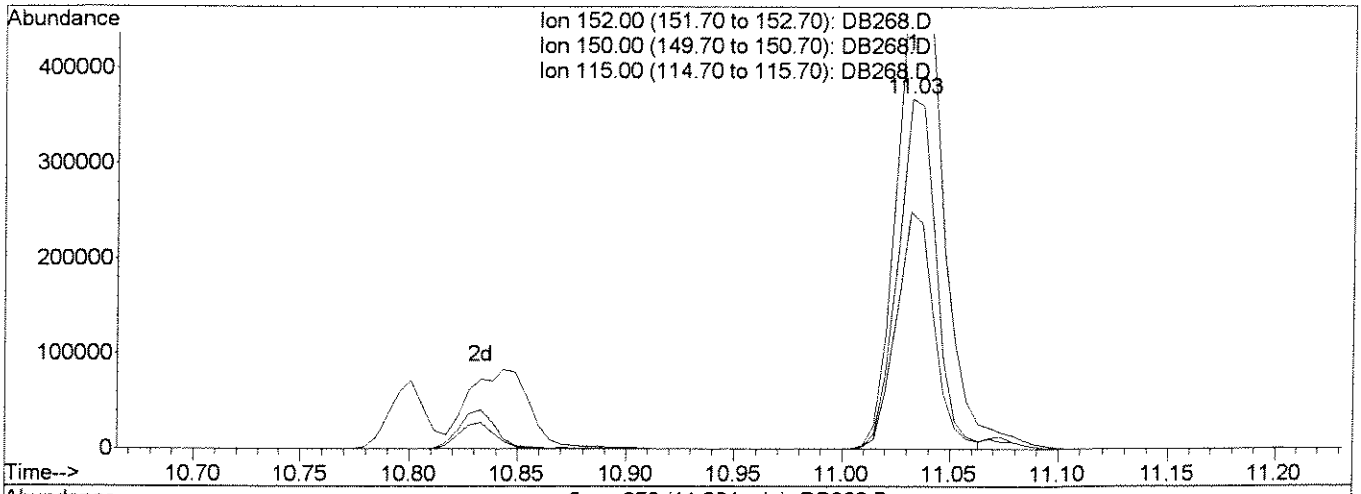


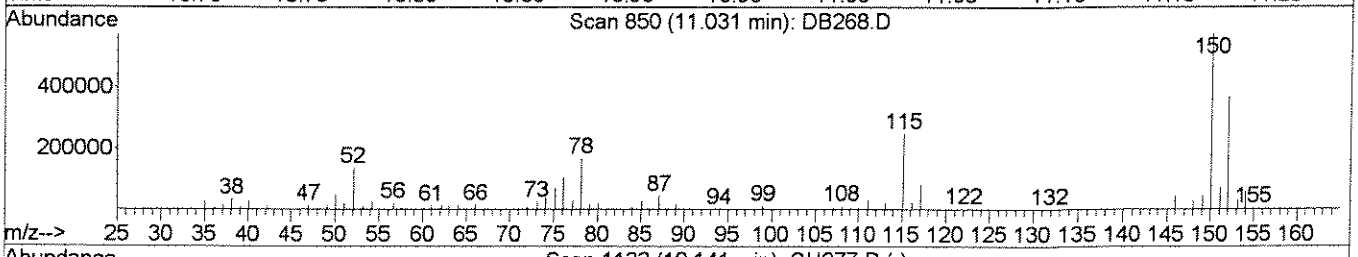
DB268.D LVI0819.M Thu Aug 20 10:09:34 2009

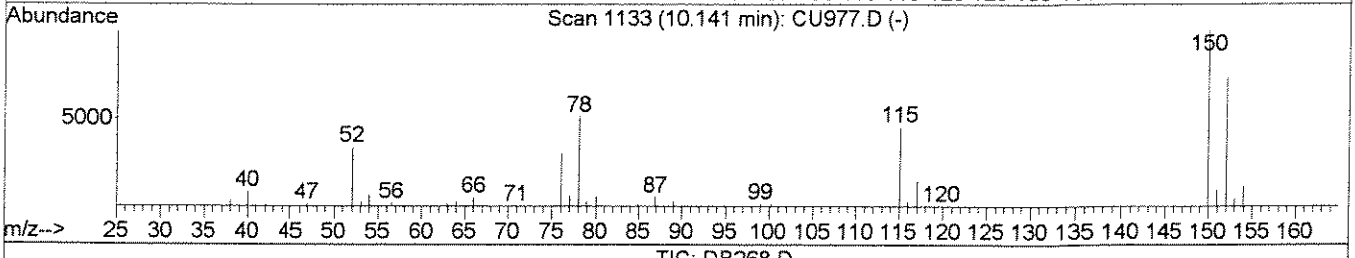
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB268.D Vial: 11
Acq On : 19 Aug 2009 7:29 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:40 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:40:09 2009
Response via : Multiple Level Calibration







TIC: DB268.D

(1) d4-1,4-Dichlorobenzene (IR)

11.03min 1.00ppm

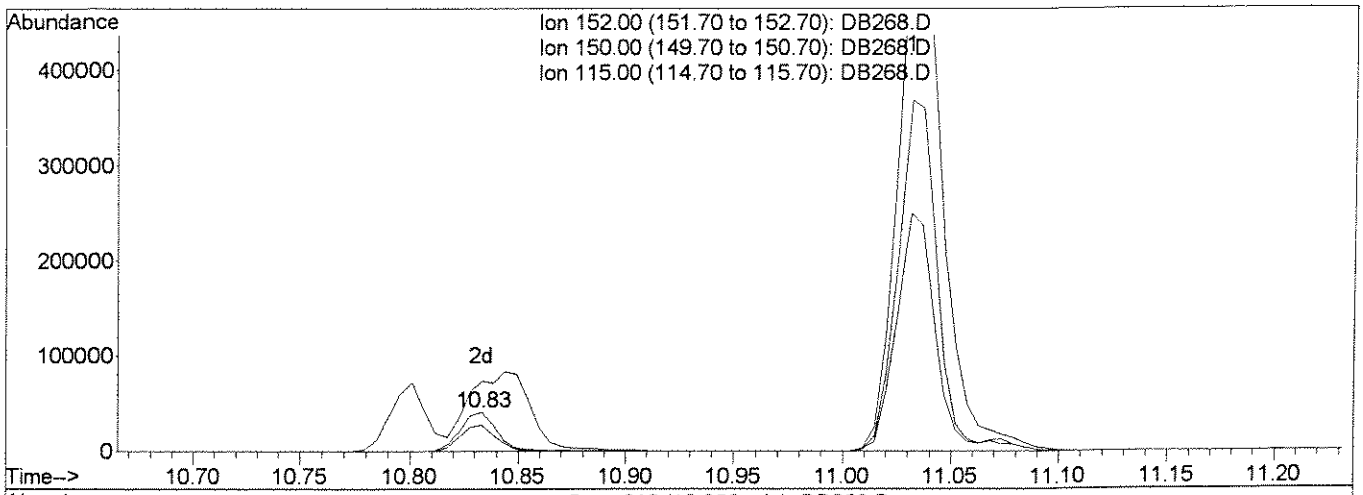
response 450416

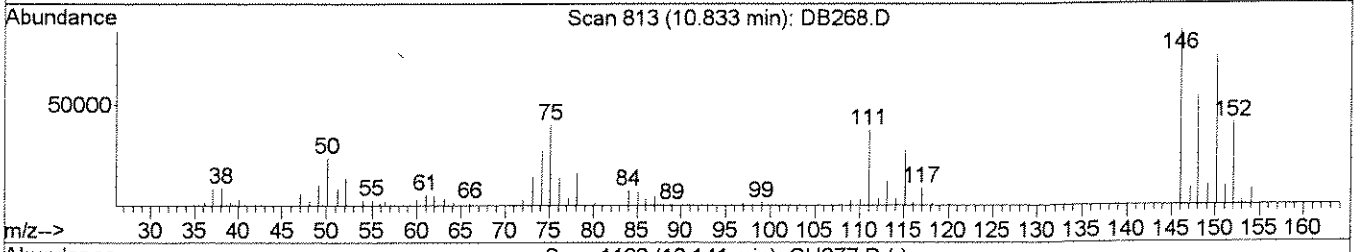
Ion	Exp%	Act%
152.00	100	100
150.00	137.90	154.50
115.00	59.50	67.26
0.00	0.00	0.00

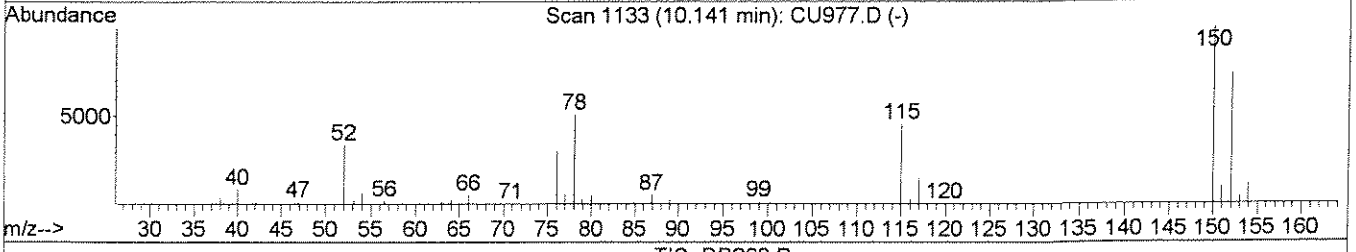
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB268.D Vial: 11
Acq On : 19 Aug 2009 7:29 pm Operator: J.Wu
Sample : INTIAL CALIBRATION Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:40 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:40:09 2009
Response via : Multiple Level Calibration







TIC: DB268.D

(1) d4-1,4-Dichlorobenzene (IR)

10.83min 1.00ppm m

response 49191

Ion	Exp%	Act%
152.00	100	100
150.00	137.90	179.63#
115.00	59.50	67.38
0.00	0.00	0.00

8/20/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB259.D Vial: 2
Acq On : 19 Aug 2009 12:46 pm Operator: J.Wu
Sample : BLK Inst : 5973-B
Misc : 08/19/2009 1.0 CAS 8270.LL BLK Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 10:10 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	51528	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	214921	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	112276	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	169511	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	175644	1.00	ppm	0.00
33) d12-Perylene	22.43	264	125700	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.42	82	180	0.00	ppm	0.02
Spiked Amount 2.000	Range 22 - 124		Recovery = 0.00%#			
11) SURR5,2-FLUOROBIPHENYL	0.00	172	0	0.00	ppm	
Spiked Amount 2.000	Range 27 - 114		Recovery = 0.00%#			
28) SURR6,TERPHENYL-D14	0.00	244	0	0.00	ppm	
Spiked Amount 2.000	Range 23 - 139		Recovery = 0.00%#			

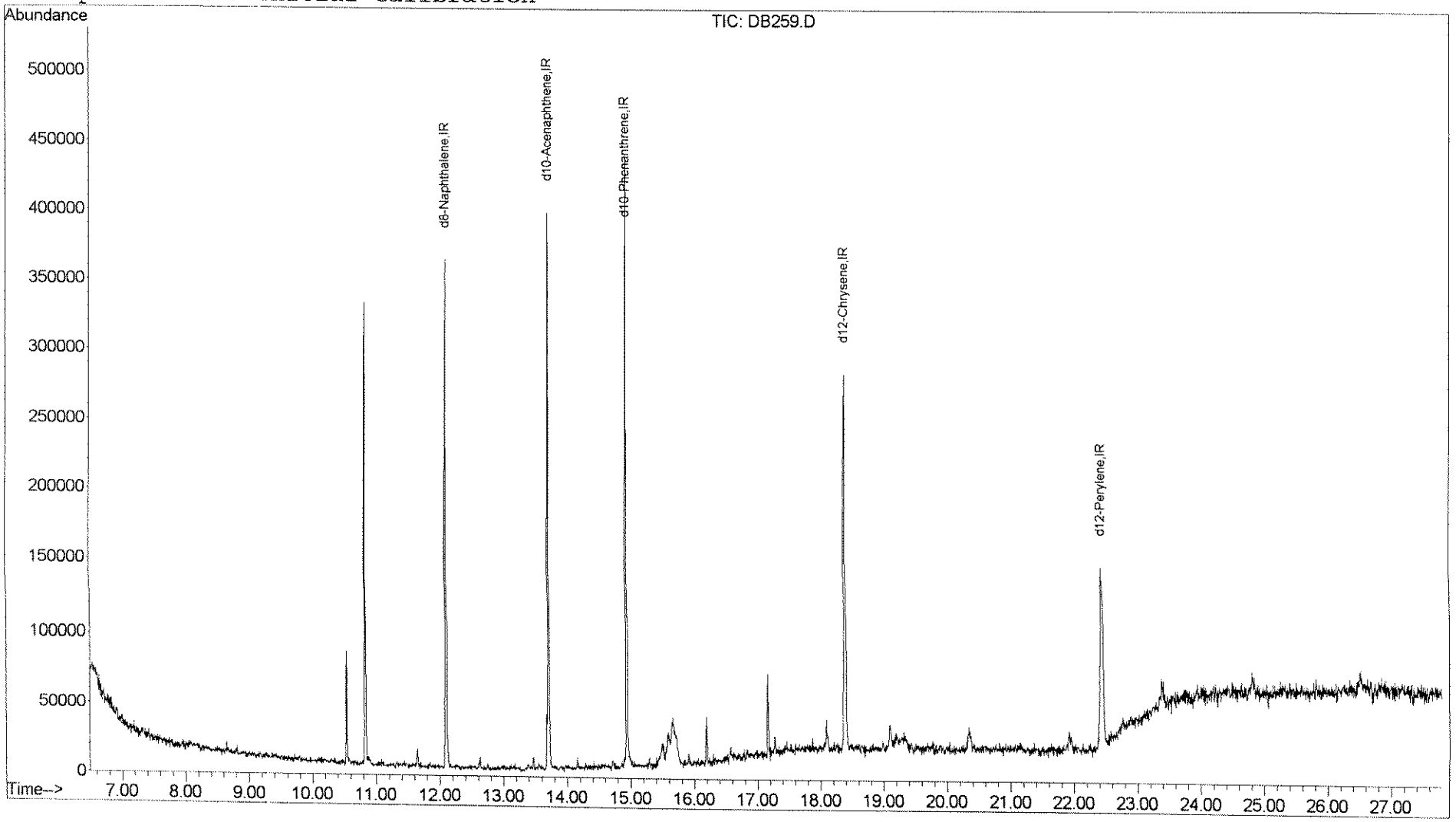
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB259.D Vial: 2
Acq On : 19 Aug 2009 12:46 pm Operator: J.Wu
Sample : BLK Inst : 5973-B
Misc : 08/19/2009 1.0 CAS 8270.LL BLK Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 10:10 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



S1-259

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	132	0.00
2	TM	1,4-Dioxane	1.021	0.000#	100.0#	0#	-6.58#
3	TM	Pyridine	1.549	1.377	11.1	110	0.01
4	IR	d8-Naphthalene	1.000	1.000	0.0	130	0.00
5	S	SURR4,NITROBENZENE-D5	0.405	0.000#	100.0#	0#	-11.41#
6	TM	Nitrobenzene	0.401	0.408	-1.7	127	0.00
7	TM	Naphthalene	1.135	1.157	-1.9	128	0.00
8	TM	2-Methylnaphthalene	0.681	0.703	-3.2	126	0.00
9	TM	1-Methylnaphthalene	0.648	0.690	-6.5	136	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	134	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.355	0.000#	100.0#	0#	-13.06#
12	TM	Acenaphthylene	1.917	1.942	-1.3	132	0.00
13	TM	Dimethyl phthalate	1.579	1.399	11.4	118	0.00
14	TM	Acenaphthene	1.224	1.227	-0.2	134	0.00
15	TM	Dibenzofuran	1.651	1.756	-6.4	143	0.00
16	TM	Fluorene	1.286	1.347	-4.7	135	0.00
17	TM	Diethylphthalate	1.595	1.424	10.7	115	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	130	0.00
19	TM	Hexachlorobenzene	0.243	0.277	-14.0	149	0.00
20	TM	Phenanthrene	1.155	1.171	-1.4	129	0.00
21	TM	Anthracene	1.129	1.159	-2.7	129	0.00
22	TM	Carbazole	0.805	0.891	-10.7	133	0.00
23	TM	Octachlorostyrene	0.058	0.067	-15.5	135	0.00
24	TM	Di-n-butylphthalate	1.462	1.326	9.3	116	0.00
25	TM	Fluoranthene	1.192	1.302	-9.2	136	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	137	0.00
27	TM	Pyrene	1.205	1.182	1.9	135	0.00
28	S	SURR6,TERPHENYL-D14	0.830	0.000#	100.0#	0#	-16.60#
29	TM	Butyl benzyl phthalate	0.644	0.533	17.2	110	0.00
30	TM	bis(2-Ethylhexyl)phthalate	0.818	0.382	53.3#	64	0.00
31	TM	Benzo(a)anthracene	1.096	1.095	0.1	134	0.00
32	TM	Chrysene	1.077	1.069	0.7	135	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	133	0.00
34	TM	Di-n-octyl phthalate	1.891	1.517	19.8	110	0.00
35	TM	Benzo(b)Fluoranthene	1.518	1.576	-3.8	137	0.00
36	TM	Benzo(k)fluoranthene	1.466	1.604	-9.4	143	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.347	1.340	0.5	130	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	1.593	1.712	-7.5	137	0.00
39	TM	Dibenz(a,h)anthracene	1.359	1.476	-8.6	141	0.00
40	TM	Benzo(g,h,i)perylene	1.257	1.424	-13.3	138	0.00

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

per #23 L.K only.

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	132	0.00
2	TM	1,4-Dioxane	4.000	0.000	100.0#	0	-6.58#
3	TM	Pyridine	2.000	1.778	11.1	110	0.01
4	IR	d8-Naphthalene	1.000	1.000	0.0	130	0.00
5	S	SURR4,NITROBENZENE-D5	2.000	0.000	100.0#	0	-11.41#
6	TM	Nitrobenzene	2.000	2.033	-1.6	127	0.00
7	TM	Naphthalene	2.000	2.038	-1.9	128	0.00
8	TM	2-Methylnaphthalene	2.000	2.065	-3.2	126	0.00
9	TM	1-Methylnaphthalene	2.000	2.129	-6.5	136	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	134	0.00
11	S	SURR5,2-FLUOROBIPHENYL	2.000	0.000	100.0#	0	-13.06#
12	TM	Acenaphthylene	2.000	2.026	-1.3	132	0.00
13	TM	Dimethyl phthalate	2.000	1.772	11.4	118	0.00
14	TM	Acenaphthene	2.000	2.005	-0.2	134	0.00
15	TM	Dibenzofuran	2.000	2.127	-6.3	143	0.00
16	TM	Fluorene	2.000	2.096	-4.8	135	0.00
17	TM	Diethylphthalate	2.000	1.785	10.8	115	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	130	0.00
19	TM	Hexachlorobenzene	2.000	2.279	-13.9	149	0.00
20	TM	Phenanthrene	2.000	2.027	-1.4	129	0.00
21	TM	Anthracene	2.000	2.055	-2.8	129	0.00
22	TM	Carbazole	2.000	2.214	-10.7	133	0.00
23	TM	Octachlorostyrene	2.000	2.122	-6.1	135	0.00
24	TM	Di-n-butylphthalate	2.000	1.814	9.3	116	0.00
25	TM	Fluoranthene	2.000	2.185	-9.3	136	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	137	0.00
27	TM	Pyrene	2.000	1.962	1.9	135	0.00
28	S	SURR6,TERPHENYL-D14	2.000	0.000	100.0#	0	-16.60#
29	TM	Butyl benzyl phthalate	2.000	1.655	17.3	110	0.00
30	TM	bis(2-Ethylhexyl)phthalate	4.000	1.869	53.3#	64	0.00
31	TM	Benzo(a)anthracene	2.000	1.998	0.1	134	0.00
32	TM	Chrysene	2.000	1.985	0.7	135	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	133	0.00
34	TM	Di-n-octyl phthalate	2.000	1.605	19.8	110	0.00
35	TM	Benzo(b)Fluoranthene	2.000	2.076	-3.8	137	0.00
36	TM	Benzo(k)fluoranthene	2.000	2.187	-9.3	143	0.00

(#) = Out of Range

00252

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	2.000	1.990	0.5	130	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	2.000	2.148	-7.4	137	0.00
39	TM	Dibenz(a,h)anthracene	2.000	2.172	-8.6	141	0.00
40	TM	Benzo(g,h,i)perylene	2.000	2.267	-13.3	138	0.00

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 11:52 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	57050	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	219517	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	123342	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	205268	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	226507	1.00	ppm	0.00
33) d12-Perylene	22.43	264	157115	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	0.00	82	0d	0.00	ppm	
Spiked Amount 2.000	Range 22 - 124		Recovery =	0.00%#		
11) SURR5,2-FLUOROBIPHENYL	0.00	172	0d	0.00	ppm	
Spiked Amount 2.000	Range 27 - 114		Recovery =	0.00%#		
28) SURR6,TERPHENYL-D14	0.00	244	0	0.00	ppm	
Spiked Amount 2.000	Range 23 - 139		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Pyridine	7.33	79	157116	1.78	ppm	92
6) Nitrobenzene	11.43	77	179037	2.03	ppm	97
7) Naphthalene	12.11	128	507810	2.04	ppm	89
8) 2-Methylnaphthalene	12.74	142	308610	2.07	ppm	99
9) 1-Methylnaphthalene	12.85	142	302786	2.13	ppm	95
12) Acenaphthylene	13.58	152	479049	2.03	ppm	98
13) Dimethyl phthalate	13.42	163	345156	1.77	ppm	99
14) Acenaphthene	13.74	153	302665	2.01	ppm	95
15) Dibenzofuran	13.88	168	433125	2.13	ppm	100
16) Fluorene	14.16	166	332398	2.10	ppm	98
17) Diethylphthalate	14.02	149	351200	1.79	ppm	98
19) Hexachlorobenzene	14.66	284	113612	2.28	ppm	91
20) Phenanthrene	14.96	178	480735	2.03	ppm	99
21) Anthracene	15.00	178	475955	2.05	ppm	97
22) Carbazole	15.12	167	365775	2.21	ppm	99
23) Octachlorostyrene	16.00	378	27643	2.12	ppm	76
24) Di-n-butylphthalate	15.36	149	544383	1.81	ppm	99
25) Fluoranthene	16.21	202	534553	2.19	ppm	99
27) Pyrene	16.50	202	535503	1.96	ppm	99
29) Butyl benzyl phthalate	17.25	149	241394m	1.65	ppm	
30) bis(2-Ethylhexyl)phthalate	18.23	149	346192	1.87	ppm	96
31) Benzo(a)anthracene	18.35	228	496051	2.00	ppm	98
32) Chrysene	18.44	228	484177	1.98	ppm	96
34) Di-n-octyl phthalate	19.67	149	476814	1.61	ppm	93
35) Benzo(b)Fluoranthene	21.13	252	495226	2.08	ppm	99
36) Benzo(k)fluoranthene	21.21	252	503869	2.19	ppm	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 11:52 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

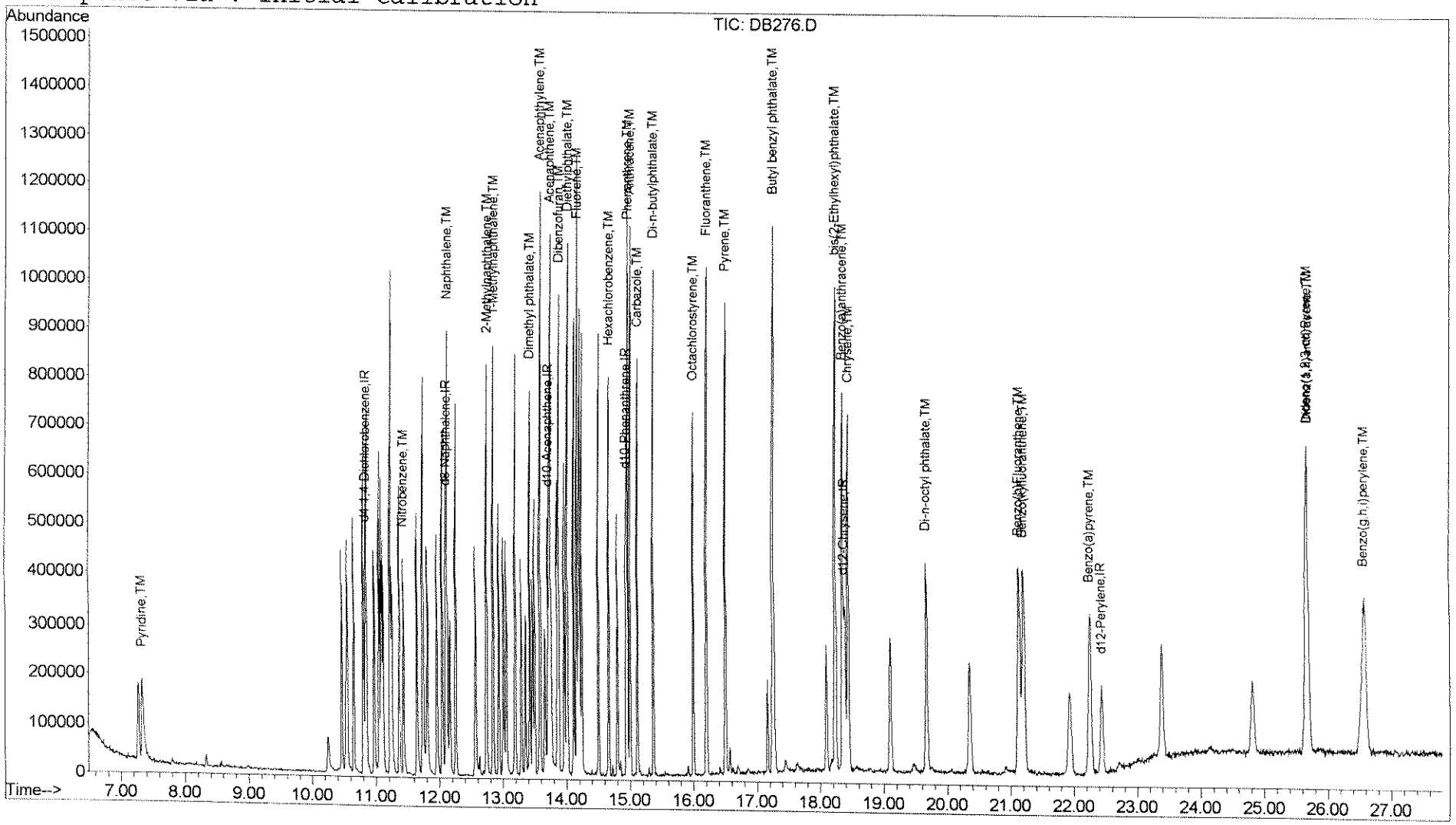
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	Benzo(a)pyrene	22.25	252	421193	1.99	ppm	91
38)	Indeno(1,2,3-cd)Pyrene	25.66	276	537807	2.15	ppm	93
39)	Dibenz(a,h)anthracene	25.68	278	463709	2.17	ppm	93
40)	Benzo(g,h,i)perylene	26.57	276	447525	2.27	ppm	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 11:52 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

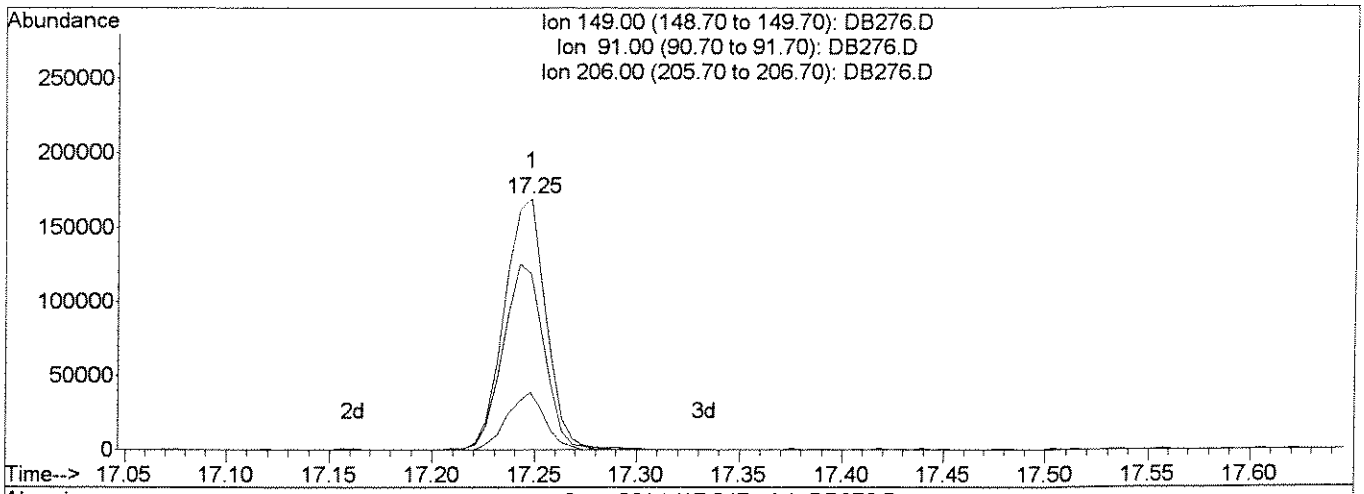


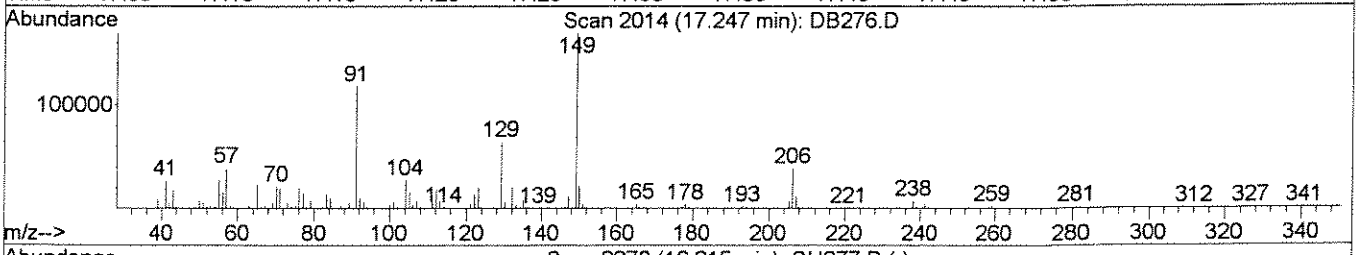
DB276.D LVI0819.M Thu Aug 20 11:52:41 2009

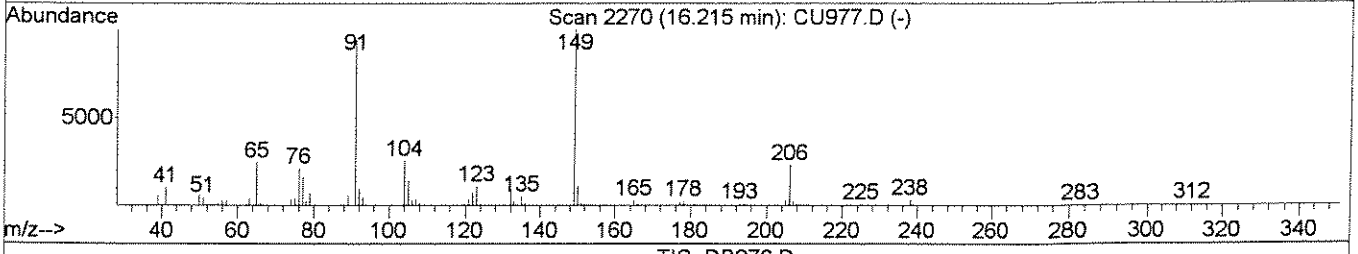
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 11:48 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration







TIC: DB276.D

(29) Butyl benzyl phthalate (TM)

17.25min 1.66ppm

response 241643

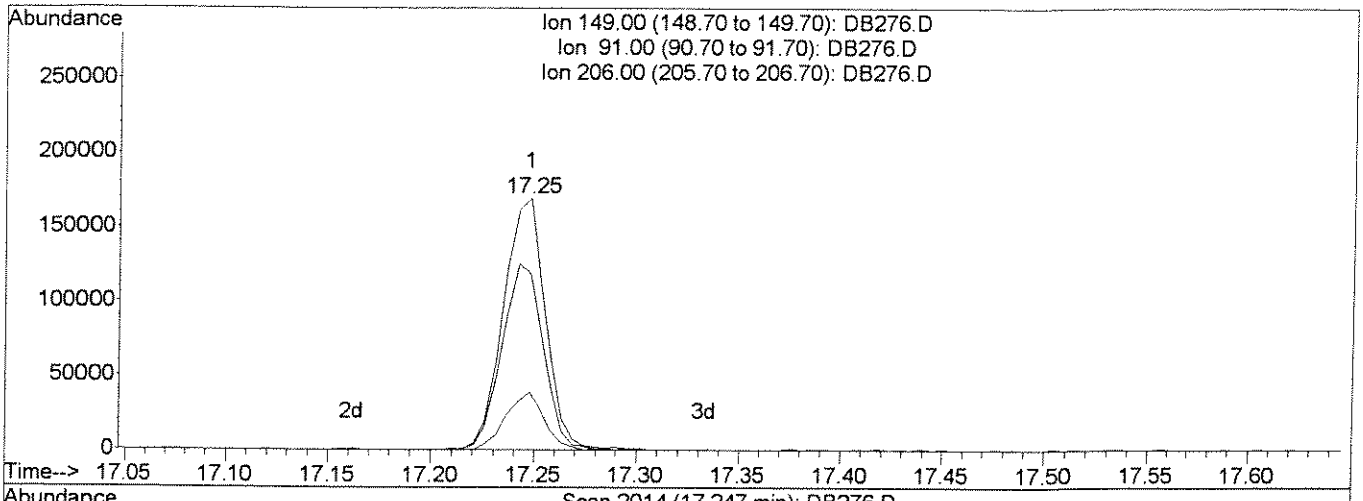
Ion	Exp%	Act%
149.00	100	100
91.00	76.50	69.82
206.00	17.10	22.95#
0.00	0.00	0.00

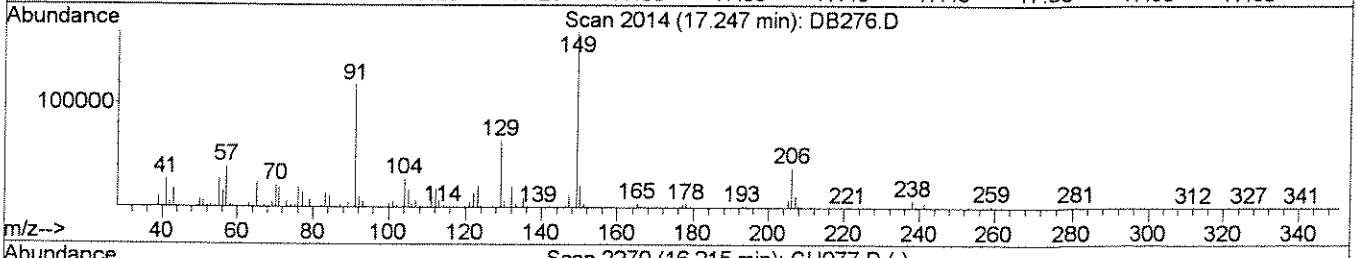
B

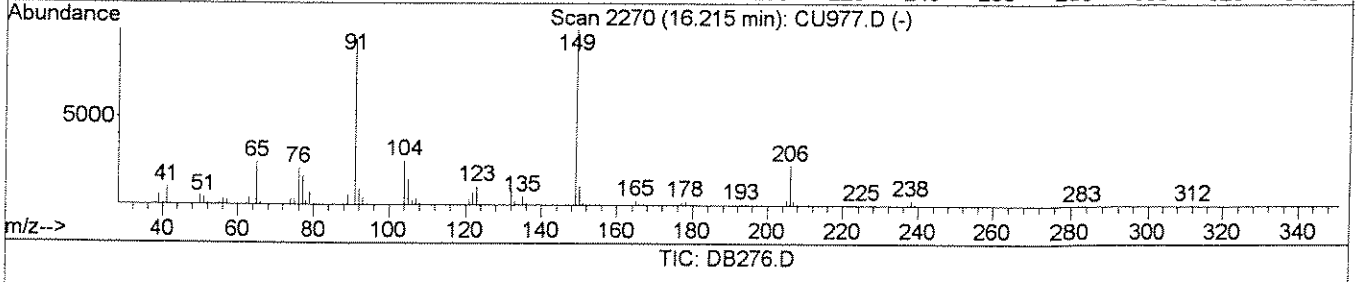
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\082009\DB276.D Vial: 1
Acq On : 20 Aug 2009 11:02 am Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 11:52 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration







TIC: DB276.D

(29) Butyl benzyl phthalate (TM)

17.25min 1.65ppm m

response 241394

Ion	Exp%	Act%
149.00	100	100
91.00	76.50	69.82
206.00	17.10	22.95#
0.00	0.00	0.00

A TJ 8/20/09

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB277.D Vial: 2
Acq On : 20 Aug 2009 11:48 am Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration for surr. # 5, 11, 28 only

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	131	0.00
2	TM	1,4-Dioxane	1.021	0.523	48.8#	68	0.01
3	TM	Pyridine	1.549	0.000#	100.0#	0#	-7.32#
4	IR	d8-Naphthalene	1.000	1.000	0.0	137	0.00
5	S	SURR4,NITROBENZENE-D5	0.405	0.386	4.7	124	0.00
6	TM	Nitrobenzene	0.401	0.000#	100.0#	0#	-11.43#
7	TM	Naphthalene	1.135	0.000#	100.0#	0#	-12.11#
8	TM	2-Methylnaphthalene	0.681	0.000#	100.0#	0#	-12.74#
9	TM	1-Methylnaphthalene	0.648	0.000#	100.0#	0#	-12.85#
10	IR	d10-Acenaphthene	1.000	1.000	0.0	135	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.355	1.384	-2.1	134	0.00
12	TM	Acenaphthylene	1.917	0.000#	100.0#	0#	-13.58#
13	TM	Dimethyl phthalate	1.579	0.000#	100.0#	0#	-13.42#
14	TM	Acenaphthene	1.224	0.000#	100.0#	0#	-13.74#
15	TM	Dibenzofuran	1.651	0.000#	100.0#	0#	-13.88#
16	TM	Fluorene	1.286	0.000#	100.0#	0#	-14.15#
17	TM	Diethylphthalate	1.595	0.000#	100.0#	0#	-14.02#
18	IR	d10-Phenanthrene	1.000	1.000	0.0	128	0.00
19	TM	Hexachlorobenzene	0.243	0.000#	100.0#	0#	-14.66#
20	TM	Phenanthrene	1.155	0.000#	100.0#	0#	-14.96#
21	TM	Anthracene	1.129	0.000#	100.0#	0#	-15.00#
22	TM	Carbazole	0.805	0.000#	100.0#	0#	-15.12#
23	TM	Octachlorostyrene	0.058	0.000#	100.0#	0#	-16.00#
24	TM	Di-n-butylphthalate	1.462	0.000#	100.0#	0#	-15.36#
25	TM	Fluoranthene	1.192	0.000#	100.0#	0#	-16.20#
26	IR	d12-Chrysene	1.000	1.000	0.0	126	0.00
27	TM	Pyrene	1.205	0.000#	100.0#	0#	-16.50#
28	S	SURR6,TERPHENYL-D14	0.830	0.854	-2.9	131	0.00
29	TM	Butyl benzyl phthalate	0.644	0.000#	100.0#	0#	-17.24#
30	TM	bis(2-Ethylhexyl)phthalate	0.818	0.347	57.6#	53	0.00
31	TM	Benzo(a)anthracene	1.096	0.000#	100.0#	0#	-18.35#
32	TM	Chrysene	1.077	0.000#	100.0#	0#	-18.44#
33	IR	d12-Perylene	1.000	1.000	0.0	122	0.00
34	TM	Di-n-octyl phthalate	1.891	0.000#	100.0#	0#	-19.67#
35	TM	Benzo(b)Fluoranthene	1.518	0.000#	100.0#	0#	-21.12#
36	TM	Benzo(k)fluoranthene	1.466	0.000#	100.0#	0#	-21.20#

(#) = Out of Range

00259

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB277.D Vial: 2
Acq On : 20 Aug 2009 11:48 am Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.347	0.000#	100.0#	0#	-22.25#
38	TM	Indeno(1,2,3-cd)Pyrene	1.593	0.000#	100.0#	0#	-25.66#
39	TM	Dibenz(a,h)anthracene	1.359	0.000#	100.0#	0#	-25.67#
40	TM	Benzo(g,h,i)perylene	1.257	0.000#	100.0#	0#	-26.58#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB277.D Vial: 2
Acq On : 20 Aug 2009 11:48 am Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration for #2, 30 only

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	132	0.00
2	TM	1,4-Dioxane	1.021	1.046	-2.4	130	0.01
3	TM	Pyridine	1.549	0.000#	100.0#	0#	-7.32#
4	IR	d8-Naphthalene	1.000	1.000	0.0	131	0.00
5	S	SURR4,NITROBENZENE-D5	0.405	0.771	-90.4#	256#	0.00
6	TM	Nitrobenzene	0.401	0.000#	100.0#	0#	-11.43#
7	TM	Naphthalene	1.135	0.000#	100.0#	0#	-12.11#
8	TM	2-Methylnaphthalene	0.681	0.000#	100.0#	0#	-12.74#
9	TM	1-Methylnaphthalene	0.648	0.000#	100.0#	0#	-12.85#
10	IR	d10-Acenaphthene	1.000	1.000	0.0	137	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.355	2.768	-104.3#	279#	0.00
12	TM	Acenaphthylene	1.917	0.000#	100.0#	0#	-13.58#
13	TM	Dimethyl phthalate	1.579	0.000#	100.0#	0#	-13.42#
14	TM	Acenaphthene	1.224	0.000#	100.0#	0#	-13.74#
15	TM	Dibenzofuran	1.651	0.000#	100.0#	0#	-13.88#
16	TM	Fluorene	1.286	0.000#	100.0#	0#	-14.15#
17	TM	Diethylphthalate	1.595	0.000#	100.0#	0#	-14.02#
18	IR	d10-Phenanthrene	1.000	1.000	0.0	135	0.00
19	TM	Hexachlorobenzene	0.243	0.000#	100.0#	0#	-14.66#
20	TM	Phenanthrene	1.155	0.000#	100.0#	0#	-14.96#
21	TM	Anthracene	1.129	0.000#	100.0#	0#	-15.00#
22	TM	Carbazole	0.805	0.000#	100.0#	0#	-15.12#
23	TM	Octachlorostyrene	0.058	0.000#	100.0#	0#	-16.00#
24	TM	Di-n-butylphthalate	1.462	0.000#	100.0#	0#	-15.36#
25	TM	Fluoranthene	1.192	0.000#	100.0#	0#	-16.20#
26	IR	d12-Chrysene	1.000	1.000	0.0	133	0.00
27	TM	Pyrene	1.205	0.000#	100.0#	0#	-16.50#
28	S	SURR6,TERPHENYL-D14	0.830	1.707	-105.7#	276#	0.00
29	TM	Butyl benzyl phthalate	0.644	0.000#	100.0#	0#	-17.24#
30	TM	bis(2-Ethylhexyl)phthalate	0.818	0.695	15.0	115	0.00
31	TM	Benzo(a)anthracene	1.096	0.000#	100.0#	0#	-18.35#
32	TM	Chrysene	1.077	0.000#	100.0#	0#	-18.44#
33	IR	d12-Perylene	1.000	1.000	0.0	125	0.00
34	TM	Di-n-octyl phthalate	1.891	0.000#	100.0#	0#	-19.67#
35	TM	Benzo(b)Fluoranthene	1.518	0.000#	100.0#	0#	-21.12#
36	TM	Benzo(k)fluoranthene	1.466	0.000#	100.0#	0#	-21.20#

(#) = Out of Range

TJ

00261

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB277.D Vial: 2
Acq On : 20 Aug 2009 11:48 am Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.347	0.000#	100.0#	0#	-22.25#
38	TM	Indeno(1,2,3-cd)Pyrene	1.593	0.000#	100.0#	0#	-25.66#
39	TM	Dibenz(a,h)anthracene	1.359	0.000#	100.0#	0#	-25.67#
40	TM	Benzo(g,h,i)perylene	1.257	0.000#	100.0#	0#	-26.58#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\082009\DB277.D Vial: 2
Acq On : 20 Aug 2009 11:48 am Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 12:17 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	56546	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	230390	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	123761	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	202053	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	208230	1.00	ppm	0.00
33) d12-Perylene	22.43	264	144327	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	177656	1.91	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 95.50%			
11) SURR5,2-FLUOROBIPHENYL	13.07	172	342607	2.04	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 102.00%			
28) SURR6,TERPHENYL-D14	16.60	244	355526	2.06	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 103.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.60	88	118321	2.05	ppm	98
30) bis(2-Ethylhexyl)phthalate	18.23	149	289400	1.70	ppm	99

(#) = qualifier out of range (m) = manual integration

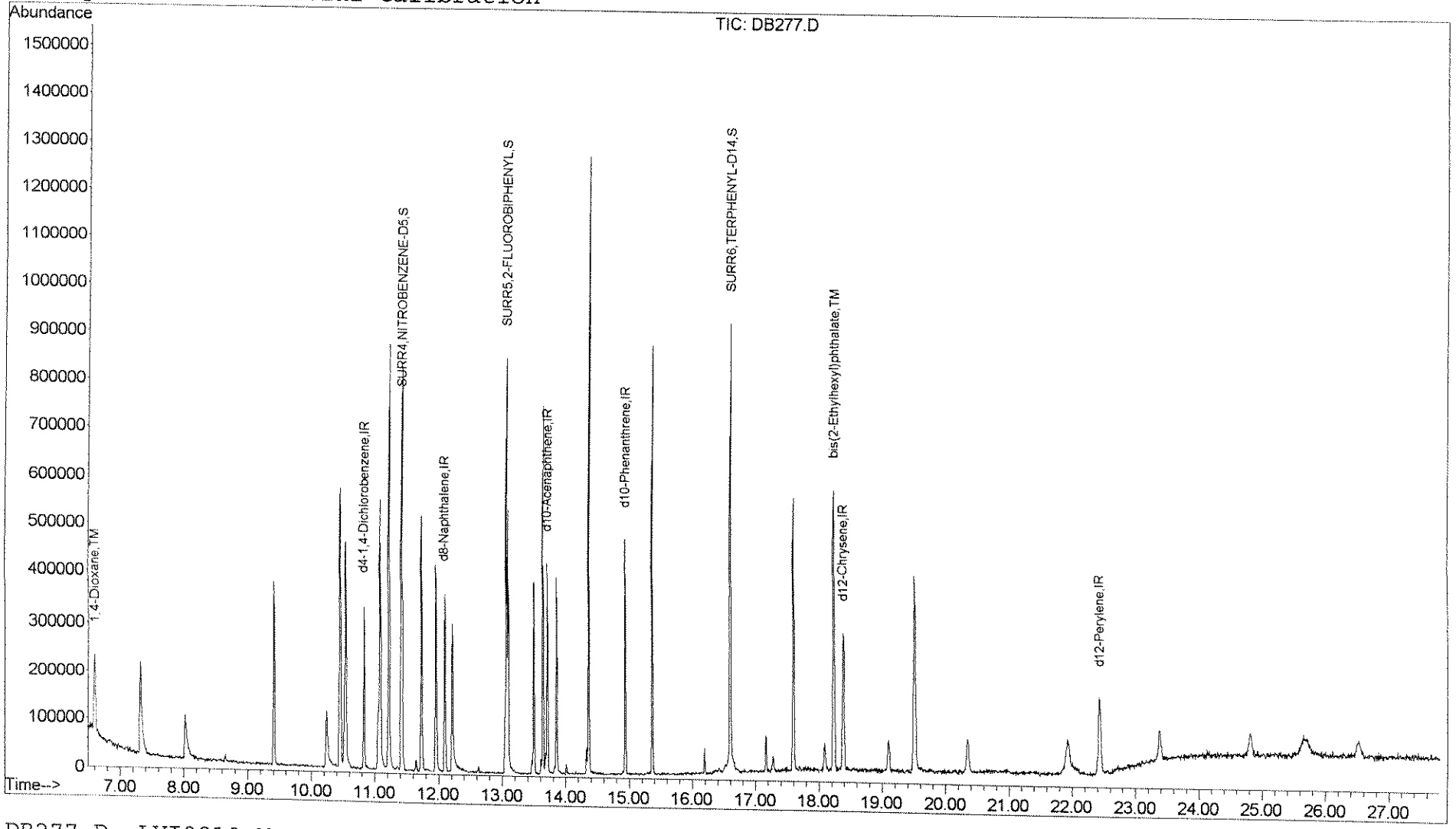
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\082009\DB277.D
Acq On : 20 Aug 2009 11:48 am
Sample : ICV 2
Misc : 2.0 PPM STD 8270.LL ICV 2
MS Integration Params: RTEINT.P
Quant Time: Aug 20 12:17 2009

Vial: 2
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	108	0.00
2	TM	1,4-Dioxane	1.021	1.165	-14.1	124	-0.02
3	TM	Pyridine	1.549	1.421	8.3	93	-0.04
4	IR	d8-Naphthalene	1.000	1.000	0.0	112	0.00
5	S	SURR4,NITROBENZENE-D5	0.405	0.396	2.2	105	0.00
6	TM	Nitrobenzene	0.401	0.397	1.0	106	0.00
7	TM	Naphthalene	1.135	1.061	6.5	101	0.00
8	TM	2-Methylnaphthalene	0.681	0.720	-5.7	112	0.00
9	TM	1-Methylnaphthalene	0.648	0.663	-2.3	113	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	117	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.355	1.347	0.6	113	0.00
12	TM	Acenaphthylene	1.917	1.845	3.8	109	0.00
13	TM	Dimethyl phthalate	1.579	1.593	-0.9	117	0.00
14	TM	Acenaphthene	1.224	1.262	-3.1	120	0.00
15	TM	Dibenzofuran	1.651	1.569	5.0	111	0.00
16	TM	Fluorene	1.286	1.329	-3.3	116	0.00
17	TM	Diethylphthalate	1.595	1.745	-9.4	123	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	119	0.00
19	TM	Hexachlorobenzene	0.243	0.247	-1.6	122	0.00
20	TM	Phenanthrene	1.155	1.053	8.8	106	0.00
21	TM	Anthracene	1.129	1.084	4.0	110	0.00
22	TM	Carbazole	0.805	0.814	-1.1	111	0.00
23	TM	Octachlorostyrene	0.058	0.055	5.2	100	-0.01
24	TM	Di-n-butylphthalate	1.462	1.521	-4.0	122	0.00
25	TM	Fluoranthene	1.192	1.177	1.3	113	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	124	0.00
27	TM	Pyrene	1.205	1.082	10.2	112	0.00
28	S	SURR6,TERPHENYL-D14	0.830	0.800	3.6	121	0.00
29	TM	Butyl benzyl phthalate	0.644	0.652	-1.2	122	0.00
30	TM	bis(2-Ethylhexyl)phthalate	0.818	0.872	-6.6	131	-0.01
31	TM	Benzo(a)anthracene	1.096	1.052	4.0	116	0.00
32	TM	Chrysene	1.077	1.030	4.4	118	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	130	0.00
34	TM	Di-n-octyl phthalate	1.891	1.982	-4.8	141	-0.02
35	TM	Benzo(b)Fluoranthene	1.518	1.478	2.6	126	0.00
36	TM	Benzo(k)fluoranthene	1.466	1.374	6.3	119	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.347	1.290	4.2	122	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	1.593	1.413	11.3	110	0.00
39	TM	Dibenz(a,h)anthracene	1.359	1.214	10.7	113	0.00
40	TM	Benzo(g,h,i)perylene	1.257	1.081	14.0	102	-0.01

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

#33 L.R.

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	108	0.00
2	TM	1,4-Dioxane	4.000	4.563	-14.1	124	-0.02
3	TM	Pyridine	2.000	1.835	8.3	93	-0.04
4	IR	d8-Naphthalene	1.000	1.000	0.0	112	0.00
5	S	SURR4,NITROBENZENE-D5	2.000	1.960	2.0	105	0.00
6	TM	Nitrobenzene	2.000	1.977	1.1	106	0.00
7	TM	Naphthalene	2.000	1.869	6.6	101	0.00
8	TM	2-Methylnaphthalene	2.000	2.117	-5.8	112	0.00
9	TM	1-Methylnaphthalene	2.000	2.048	-2.4	113	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	117	0.00
11	S	SURR5,2-FLUOROBIPHENYL	2.000	1.988	0.6	113	0.00
12	TM	Acenaphthylene	2.000	1.925	3.7	109	0.00
13	TM	Dimethyl phthalate	2.000	2.018	-0.9	117	0.00
14	TM	Acenaphthene	2.000	2.063	-3.2	120	0.00
15	TM	Dibenzofuran	2.000	1.901	4.9	111	0.00
16	TM	Fluorene	2.000	2.067	-3.4	116	0.00
17	TM	Diethylphthalate	2.000	2.187	-9.3	123	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	119	0.00
19	TM	Hexachlorobenzene	2.000	2.034	-1.7	122	0.00
20	TM	Phenanthrene	2.000	1.822	8.9	106	0.00
21	TM	Anthracene	2.000	1.921	3.9	110	0.00
22	TM	Carbazole	2.000	2.021	-1.0	111	0.00
23	TM	Octachlorostyrene	2.000	1.782	10.9	100	-0.01
24	TM	Di-n-butylphthalate	2.000	2.080	-4.0	122	0.00
25	TM	Fluoranthene	2.000	1.976	1.2	113	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	124	0.00
27	TM	Pyrene	2.000	1.797	10.2	112	0.00
28	S	SURR6,TERPHENYL-D14	2.000	1.928	3.6	121	0.00
29	TM	Butyl benzyl phthalate	2.000	2.024	-1.2	122	0.00
30	TM	bis(2-Ethylhexyl)phthalate	4.000	4.265	-6.6	131	-0.01
31	TM	Benzo(a)anthracene	2.000	1.920	4.0	116	0.00
32	TM	Chrysene	2.000	1.912	4.4	118	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	130	0.00
34	TM	Di-n-octyl phthalate	2.000	2.097	-4.8	141	-0.02
35	TM	Benzo(b)Fluoranthene	2.000	1.946	2.7	126	0.00
36	TM	Benzo(k)fluoranthene	2.000	1.874	6.3	119	0.00

(#) = Out of Range

00267

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	2.000	1.915	4.2	122	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	2.000	1.774	11.3	110	0.00
39	TM	Dibenz(a,h)anthracene	2.000	1.788	10.6	113	0.00
40	TM	Benzo(g,h,i)perylene	2.000	1.720	14.0	102	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:10 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	46549	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	188919	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	107400	1.00	ppm	0.00
18) d10-Phenanthrene	14.94	188	187946	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	205373	1.00	ppm	0.00
33) d12-Perylene	22.43	264	153205	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	149797	1.96	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 98.00%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	289273	1.99	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 99.50%			
28) SURR6,TERPHENYL-D14	16.60	244	328456	1.93	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 96.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.57	88	216919	4.56	ppm	89
3) Pyridine	7.28	79	132256	1.83	ppm	90
6) Nitrobenzene	11.42	77	149867	1.98	ppm	91
7) Naphthalene	12.11	128	400769	1.87	ppm	93
8) 2-Methylnaphthalene	12.74	142	272223	2.12	ppm	89
9) 1-Methylnaphthalene	12.85	142	250653	2.05	ppm	96
12) Acenaphthylene	13.59	152	396210	1.92	ppm	99
13) Dimethyl phthalate	13.42	163	342240	2.02	ppm	98
14) Acenaphthene	13.74	153	271161	2.06	ppm	97
15) Dibenzofuran	13.88	168	336963	1.90	ppm	96
16) Fluorene	14.16	166	285488	2.07	ppm	95
17) Diethylphthalate	14.01	149	374721	2.19	ppm	95
19) Hexachlorobenzene	14.66	284	92830	2.03	ppm	95
20) Phenanthrene	14.96	178	395693	1.82	ppm	97
21) Anthracene	15.00	178	407537	1.92	ppm	98
22) Carbazole	15.12	167	305793	2.02	ppm	98
23) Octachlorostyrene	15.98	378	20614	1.78	ppm	89
24) Di-n-butylphthalate	15.35	149	571802	2.08	ppm	98
25) Fluoranthene	16.20	202	442549	1.98	ppm	96
27) Pyrene	16.50	202	444564	1.80	ppm	99
29) Butyl benzyl phthalate	17.23	149	267711	2.02	ppm	93
30) bis(2-Ethylhexyl)phthalate	18.22	149	716101	4.26	ppm	97
31) Benzo(a)anthracene	18.35	228	432059	1.92	ppm	96
32) Chrysene	18.44	228	422875	1.91	ppm	99
34) Di-n-octyl phthalate	19.65	149	607320	2.10	ppm	95
35) Benzo(b)Fluoranthene	21.13	252	452763	1.95	ppm	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:10 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

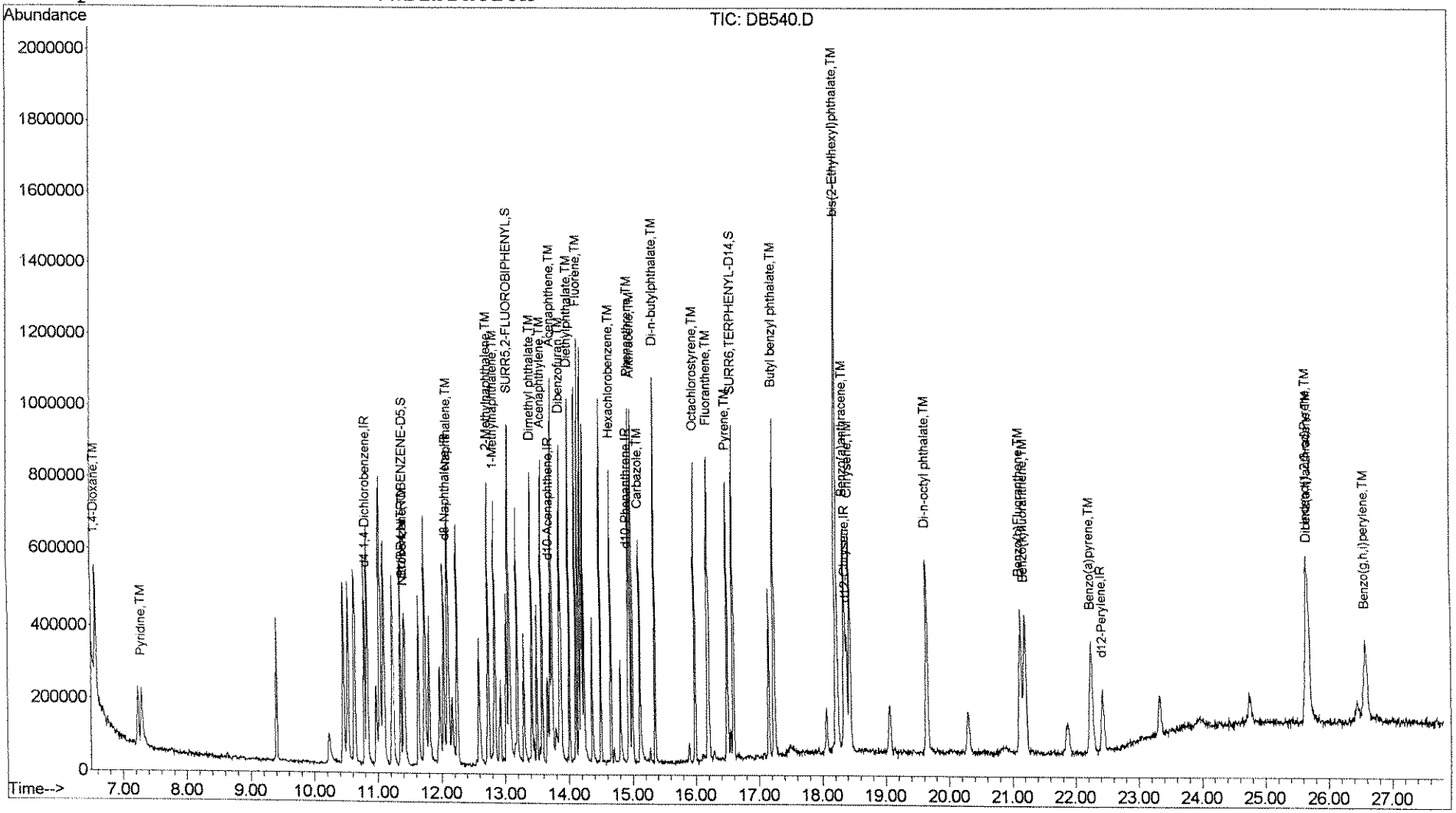
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.20	252	421124	1.87	ppm	96
37)	Benzo(a)pyrene	22.24	252	395161	1.92	ppm	95
38)	Indeno(1,2,3-cd)Pyrene	25.66	276	433000	1.77	ppm	76
39)	Dibenz(a,h)anthracene	25.68	278	372075	1.79	ppm	97
40)	Benzo(g,h,i)perylene	26.57	276	331211	1.72	ppm	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB540.D Vial: 1
Acq On : 9 Sep 2009 10:42 am Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:10 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

#23 L.R.

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	96	0.00
2	TM	1,4-Dioxane	1.021	1.124	-10.1	106	-0.01
3	TM	Pyridine	1.549	1.514	2.3	88	-0.04
4	IR	d8-Naphthalene	1.000	1.000	0.0	99	0.00
5	S	SURR4,NITROBENZENE-D5	0.405	0.425	-4.9	99	0.00
6	TM	Nitrobenzene	0.401	0.391	2.5	92	0.00
7	TM	Naphthalene	1.135	1.093	3.7	92	0.00
8	TM	2-Methylnaphthalene	0.681	0.681	0.0	93	0.00
9	TM	1-Methylnaphthalene	0.648	0.631	2.6	95	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	93	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.355	1.460	-7.7	98	0.00
12	TM	Acenaphthylene	1.917	1.902	0.8	90	0.00
13	TM	Dimethyl phthalate	1.579	1.643	-4.1	96	0.00
14	TM	Acenaphthene	1.224	1.193	2.5	90	0.00
15	TM	Dibenzofuran	1.651	1.774	-7.5	100	0.00
16	TM	Fluorene	1.286	1.479	-15.0	103	0.00
17	TM	Diethylphthalate	1.595	1.938	-21.5#	109	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	113	0.00
19	TM	Hexachlorobenzene	0.243	0.244	-0.4	114	0.00
20	TM	Phenanthrene	1.155	1.080	6.5	104	0.00
21	TM	Anthracene	1.129	1.117	1.1	108	0.00
22	TM	Carbazole	0.805	0.826	-2.6	107	0.00
23	TM	Octachlorostyrene	0.058	0.066	-13.8	115	0.00
24	TM	Di-n-butylphthalate	1.462	1.476	-1.0	112	0.00
25	TM	Fluoranthene	1.192	1.215	-1.9	111	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	116	0.00
27	TM	Pyrene	1.205	1.156	4.1	112	0.00
28	S	SURR6,TERPHENYL-D14	0.830	0.814	1.9	116	0.00
29	TM	Butyl benzyl phthalate	0.644	0.642	0.3	113	-0.01
30	TM	bis(2-Ethylhexyl)phthalate	0.818	0.867	-6.0	122	-0.02
31	TM	Benzo(a)anthracene	1.096	1.082	1.3	112	0.00
32	TM	Chrysene	1.077	1.049	2.6	113	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	128	0.00
34	TM	Di-n-octyl phthalate	1.891	1.795	5.1	125	-0.03
35	TM	Benzo(b)Fluoranthene	1.518	1.427	6.0	119	0.00
36	TM	Benzo(k)fluoranthene	1.466	1.395	4.8	119	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.347	1.276	5.3	119	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	1.593	1.515	4.9	116	0.00
39	TM	Dibenz(a,h)anthracene	1.359	1.253	7.8	115	-0.01
40	TM	Benzo(g,h,i)perylene	1.257	1.340	-6.6	124	-0.01

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

#23 L.R.

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	96	0.00
2	TM	1,4-Dioxane	4.000	4.403	-10.1	106	-0.01
3	TM	Pyridine	2.000	1.956	2.2	88	-0.04
4	IR	d8-Naphthalene	1.000	1.000	0.0	99	0.00
5	S	SURR4,NITROBENZENE-D5	2.000	2.099	-5.0	99	0.00
6	TM	Nitrobenzene	2.000	1.947	2.6	92	0.00
7	TM	Naphthalene	2.000	1.925	3.7	92	0.00
8	TM	2-Methylnaphthalene	2.000	2.002	-0.1	93	0.00
9	TM	1-Methylnaphthalene	2.000	1.947	2.6	95	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	93	0.00
11	S	SURR5,2-FLUOROBIPHENYL	2.000	2.156	-7.8	98	0.00
12	TM	Acenaphthylene	2.000	1.984	0.8	90	0.00
13	TM	Dimethyl phthalate	2.000	2.081	-4.0	96	0.00
14	TM	Acenaphthene	2.000	1.950	2.5	90	0.00
15	TM	Dibenzofuran	2.000	2.149	-7.5	100	0.00
16	TM	Fluorene	2.000	2.300	-15.0	103	0.00
17	TM	Diethylphthalate	2.000	2.430	-21.5#	109	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	113	0.00
19	TM	Hexachlorobenzene	2.000	2.011	-0.6	114	0.00
20	TM	Phenanthrene	2.000	1.870	6.5	104	0.00
21	TM	Anthracene	2.000	1.979	1.0	108	0.00
22	TM	Carbazole	2.000	2.052	-2.6	107	0.00
23	TM	Octachlorostyrene	2.000	2.093	-4.6	115	0.00
24	TM	Di-n-butylphthalate	2.000	2.018	-0.9	112	0.00
25	TM	Fluoranthene	2.000	2.038	-1.9	111	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	116	0.00
27	TM	Pyrene	2.000	1.919	4.0	112	0.00
28	S	SURR6,TERPHENYL-D14	2.000	1.962	1.9	116	0.00
29	TM	Butyl benzyl phthalate	2.000	1.995	0.2	113	-0.01
30	TM	bis(2-Ethylhexyl)phthalate	4.000	4.242	-6.0	122	-0.02
31	TM	Benzo(a)anthracene	2.000	1.974	1.3	112	0.00
32	TM	Chrysene	2.000	1.947	2.6	113	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	128	0.00
34	TM	Di-n-octyl phthalate	2.000	1.899	5.0	125	-0.03
35	TM	Benzo(b)Fluoranthene	2.000	1.879	6.0	119	0.00
36	TM	Benzo(k)fluoranthene	2.000	1.902	4.9	119	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	2.000	1.894	5.3	119	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	2.000	1.902	4.9	116	0.00
39	TM	Dibenz(a,h)anthracene	2.000	1.844	7.8	115	-0.01
40	TM	Benzo(g,h,i)perylene	2.000	2.132	-6.6	124	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:24 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	41410	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	166566	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	85700	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	178591	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	192301	1.00	ppm	0.00
33) d12-Perylene	22.43	264	150666	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	141476	2.10	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 105.00%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	250310	2.16	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 108.00%			
28) SURR6,TERPHENYL-D14	16.59	244	313064	1.96	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 98.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.57	88	186186	4.40	ppm	96
3) Pyridine	7.29	79	125424	1.96	ppm	93
6) Nitrobenzene	11.42	77	130113	1.95	ppm	92
7) Naphthalene	12.10	128	364039	1.93	ppm	97
8) 2-Methylnaphthalene	12.74	142	226995	2.00	ppm	93
9) 1-Methylnaphthalene	12.84	142	210149	1.95	ppm	87
12) Acenaphthylene	13.58	152	325943	1.98	ppm	97
13) Dimethyl phthalate	13.42	163	281616	2.08	ppm	98
14) Acenaphthene	13.73	153	204478	1.95	ppm	93
15) Dibenzofuran	13.87	168	304002	2.15	ppm	99
16) Fluorene	14.16	166	253466	2.30	ppm	97
17) Diethylphthalate	14.01	149	332157	2.43	ppm	97
19) Hexachlorobenzene	14.66	284	87202	2.01	ppm	92
20) Phenanthrene	14.95	178	385797	1.87	ppm	98
21) Anthracene	14.99	178	398945	1.98	ppm	99
22) Carbazole	15.12	167	295079	2.05	ppm	97
23) Octachlorostyrene	15.99	378	23661	2.09	ppm	89
24) Di-n-butylphthalate	15.35	149	527067	2.02	ppm	99
25) Fluoranthene	16.20	202	433803	2.04	ppm	92
27) Pyrene	16.50	202	444590	1.92	ppm	97
29) Butyl benzyl phthalate	17.23	149	247074	2.00	ppm	99
30) bis(2-Ethylhexyl)phthalate	18.21	149	666881	4.24	ppm	97
31) Benzo(a)anthracene	18.34	228	416008	1.97	ppm	96
32) Chrysene	18.43	228	403302	1.95	ppm	95
34) Di-n-octyl phthalate	19.64	149	540940	1.90	ppm	93
35) Benzo(b)Fluoranthene	21.12	252	429896	1.88	ppm	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:24 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

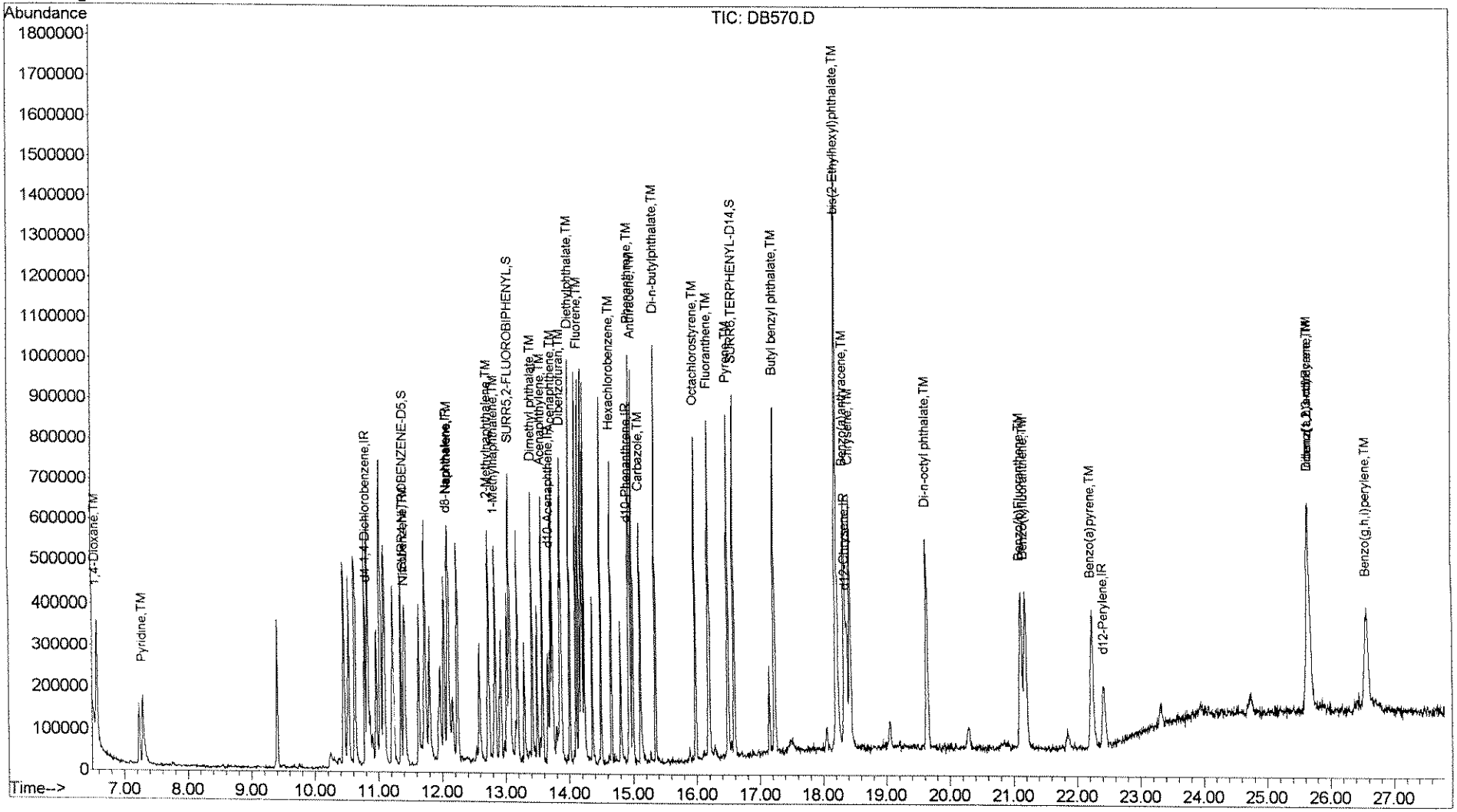
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.19	252	420241	1.90	ppm	93
37)	Benzo(a)pyrene	22.24	252	384393	1.89	ppm	87
38)	Indeno(1,2,3-cd)Pyrene	25.65	276	456579	1.90	ppm	87
39)	Dibenz(a,h)anthracene	25.66	278	377471	1.84	ppm	95
40)	Benzo(g,h,i)perylene	26.57	276	403744	2.13	ppm	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB570.D Vial: 1
Acq On : 10 Sep 2009 12:56 pm Operator: J.Wu
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 13:24 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB256.D
Acq On : 19 Aug 2009 10:26 am
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:08 2009

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: DFTPPLVI.RES

Quant Method : J:\ACQUDATA\5...\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:08:19 2009
Response via : Initial Calibration
DataAcq Meth : DFTPPLVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.53	152	56113	1.00	ppb	0.00
2) d8-Naphthalene	11.80	136	219059	1.00	ppb	0.00
3) d10-Acenaphthene	13.41	164	113580	1.00	ppb	0.00
4) d10-Phenanthrene	14.67	188	181890	1.00	ppb	0.00
10) d12-Chrysene	18.09	240	189554	1.00	ppb	0.00
12) d12-Perylene	22.14	264	129569	1.00	ppb	0.00
Target Compounds						Qvalue
5) Pentachlorophenol	14.54	266	249929	10.00	ppb	100
6) DFTPP	14.82	198	279558	9.81	ppb	100
9) 4,4'-DDT	17.16	235	881817	10.00	ppb	100
11) Benzidine	15.99	184	656796	10.00	ppb	100

(#) = qualifier out of range (m) = manual integration

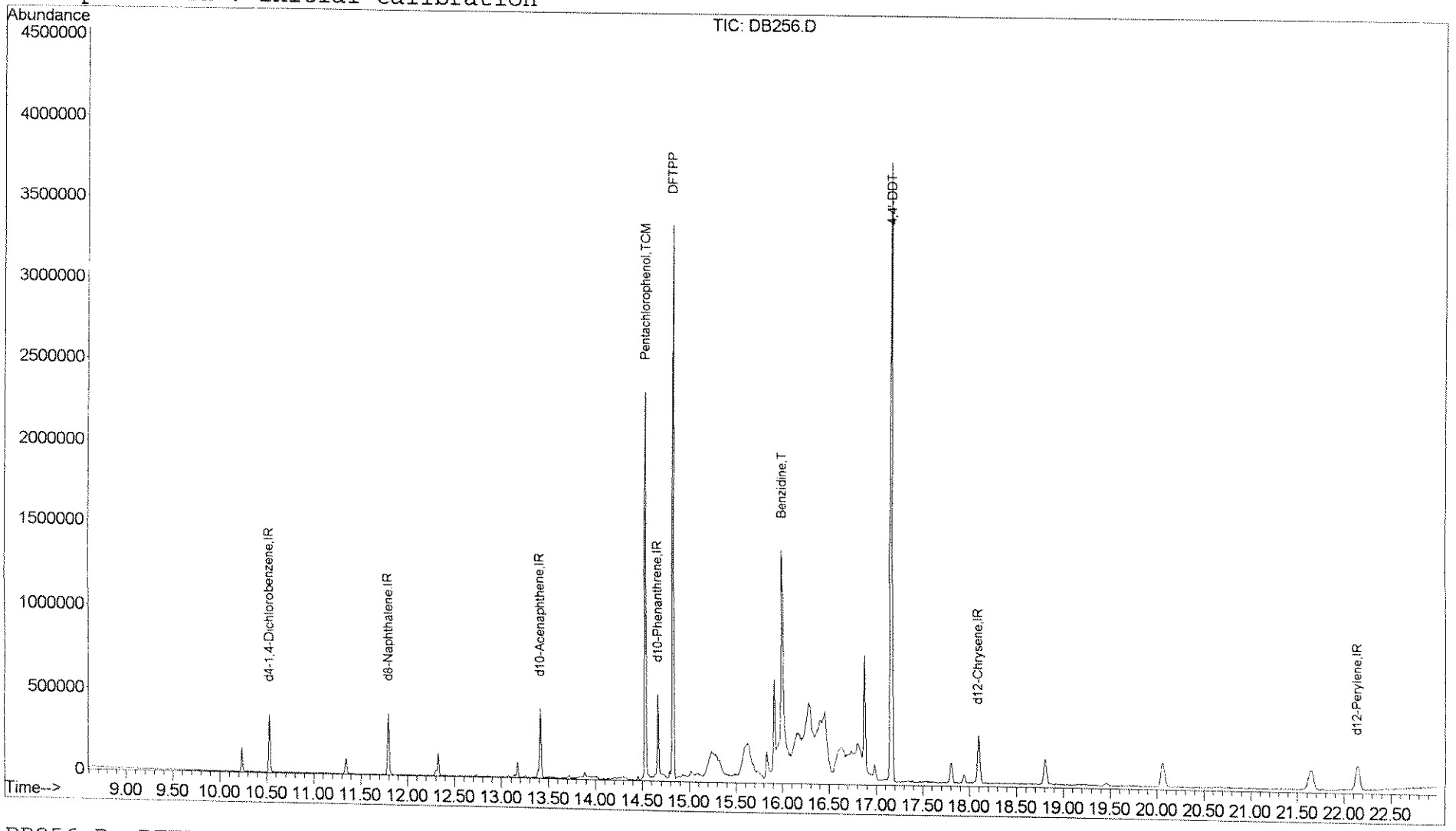
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\081909\DB256.D
Acq On : 19 Aug 2009 10:26 am
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:08 2009

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: DFTPPLVI.RES

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:08:19 2009
Response via : Initial Calibration

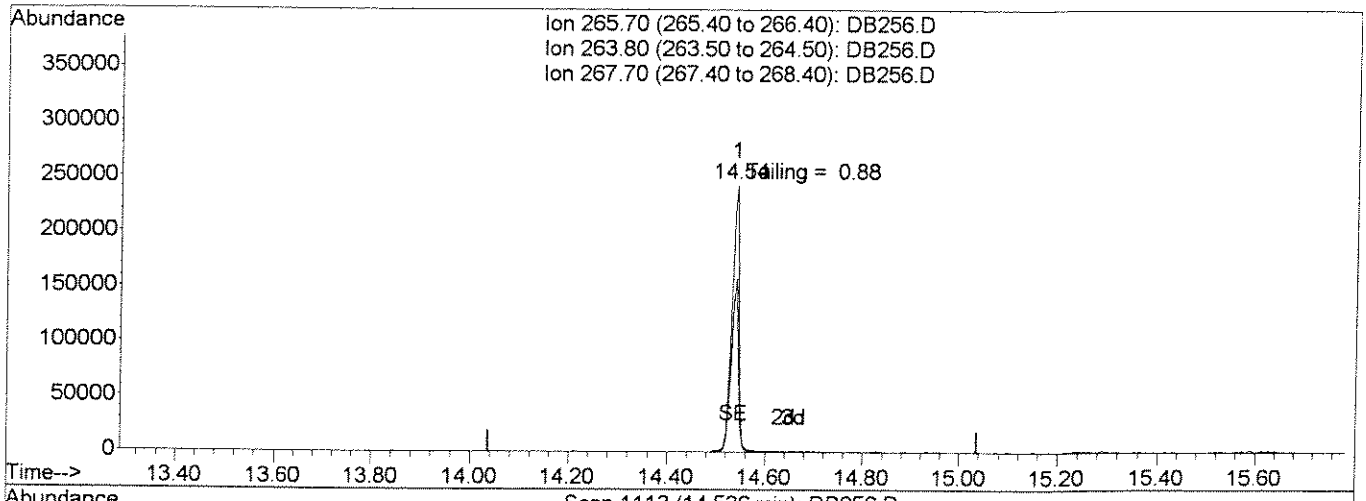


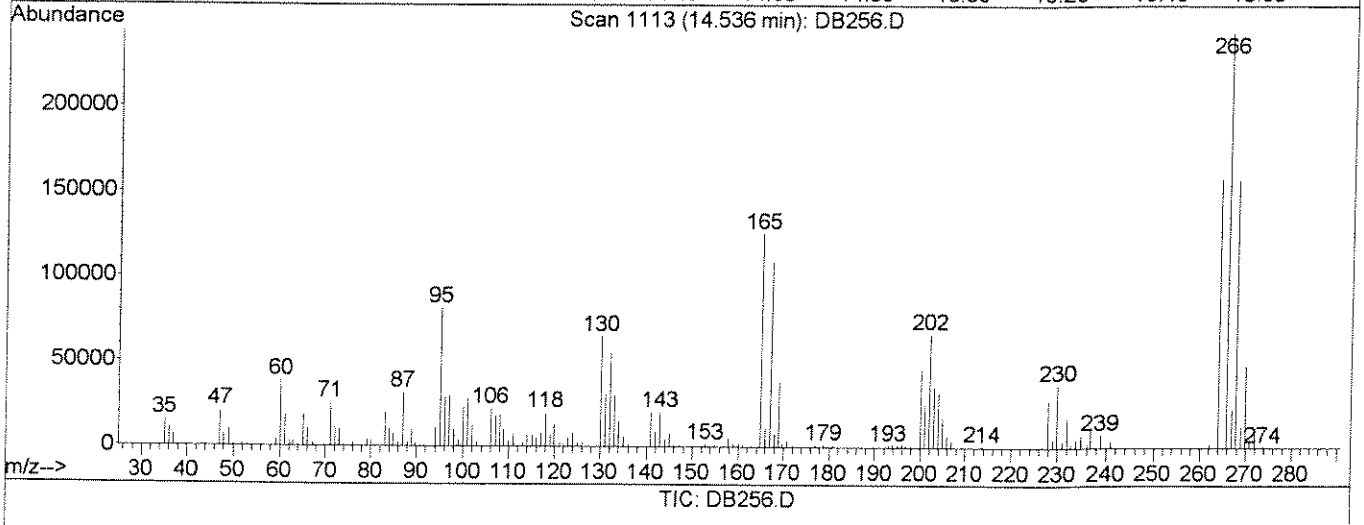
DB256.D DFTPPLVI.M Thu Aug 20 09:08:47 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB256.D Vial: 1
Acq On : 19 Aug 2009 10:26 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:08 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:08:49 2009
Response via : Single Level Calibration





TIC: DB256.D

(5) Pentachlorophenol (TCM)

14.54min 10.00ppb

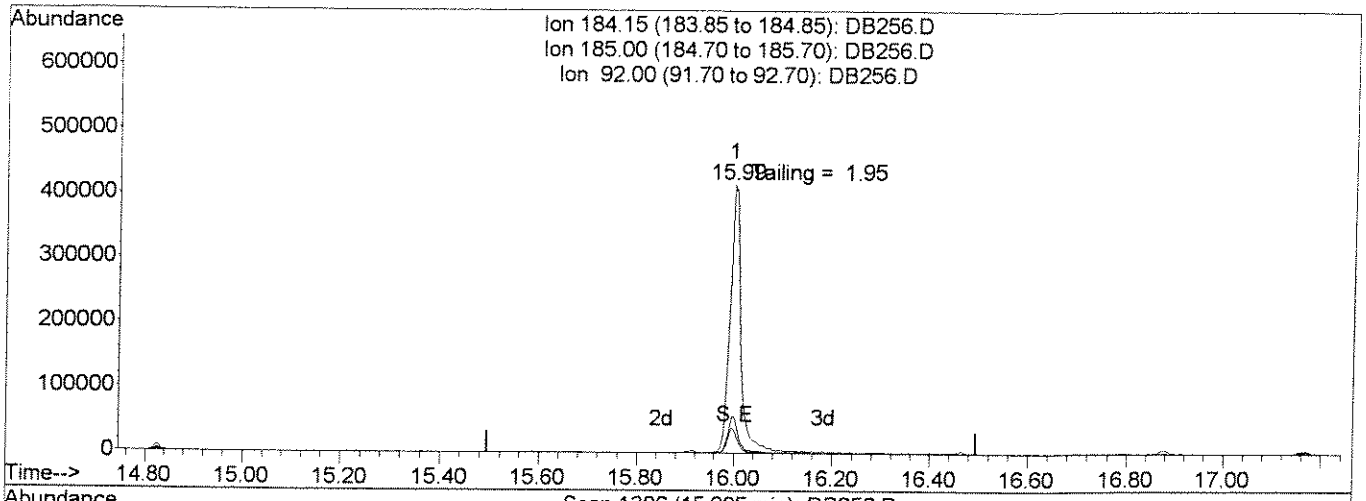
response 249929

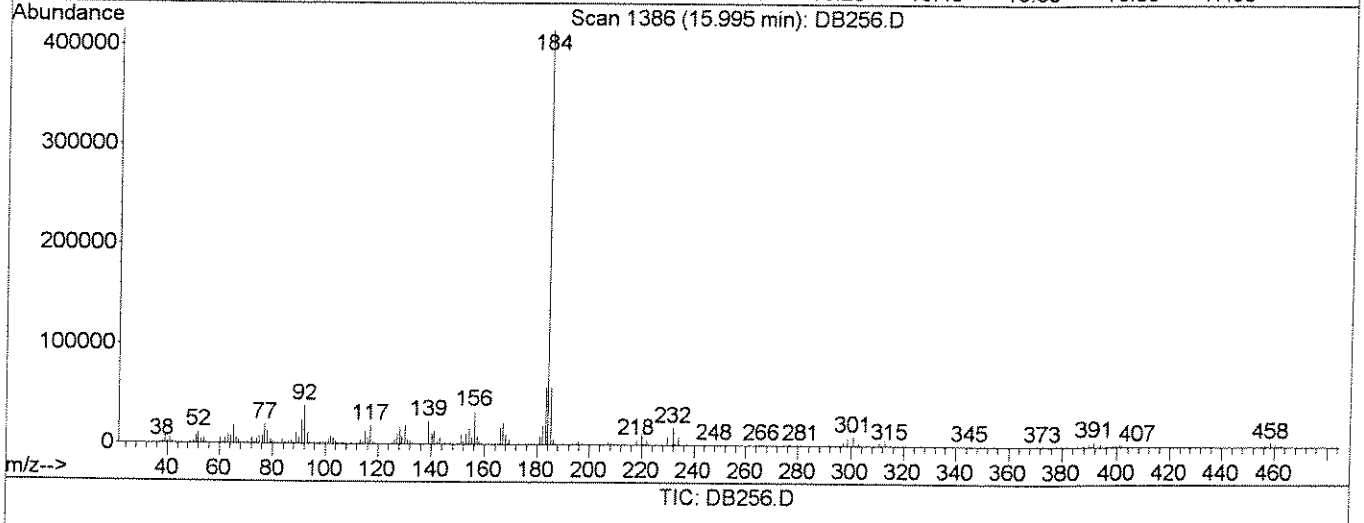
Ion	Exp%	Act%
265.70	100	100
263.80	64.60	64.56
267.70	64.40	64.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\081909\DB256.D Vial: 1
Acq On : 19 Aug 2009 10:26 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 20 9:08 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 09:08:49 2009
Response via : Single Level Calibration





(11) Benzidine (T)

15.99min 10.00ppb

response 656796

Ion	Exp%	Act%
184.15	100	100
185.00	13.50	13.52
92.00	9.30	9.28
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:52 2009 Quant Results File: DFTPPLVI.RES

Quant Method : J:\ACQUDATA\5...\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Initial Calibration
DataAcq Meth : DFTPPLVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.52	152	41442	1.00	ppb	0.00
2) d8-Naphthalene	11.80	136	160905	1.00	ppb	0.00
3) d10-Acenaphthene	13.42	164	94983	1.00	ppb	0.00
4) d10-Phenanthrene	14.67	188	149228	1.00	ppb	0.00
10) d12-Chrysene	18.09	240	173495	1.00	ppb	0.00
12) d12-Perylene	22.15	264	130467	1.00	ppb	0.00
Target Compounds						Qvalue
5) Pentachlorophenol	14.54	266	187258	9.57	ppb	94
6) DFTPP	14.82	198	322558	9.83	ppb	78
8) 4,4'-DDD	16.71	235	45728m	1721.60	ppb	
9) 4,4'-DDT	17.15	235	719818	9.73	ppb	98
11) Benzidine	16.00	184	614597	8.58	ppb	95

4,4'-DDT Breakdown < 20%.

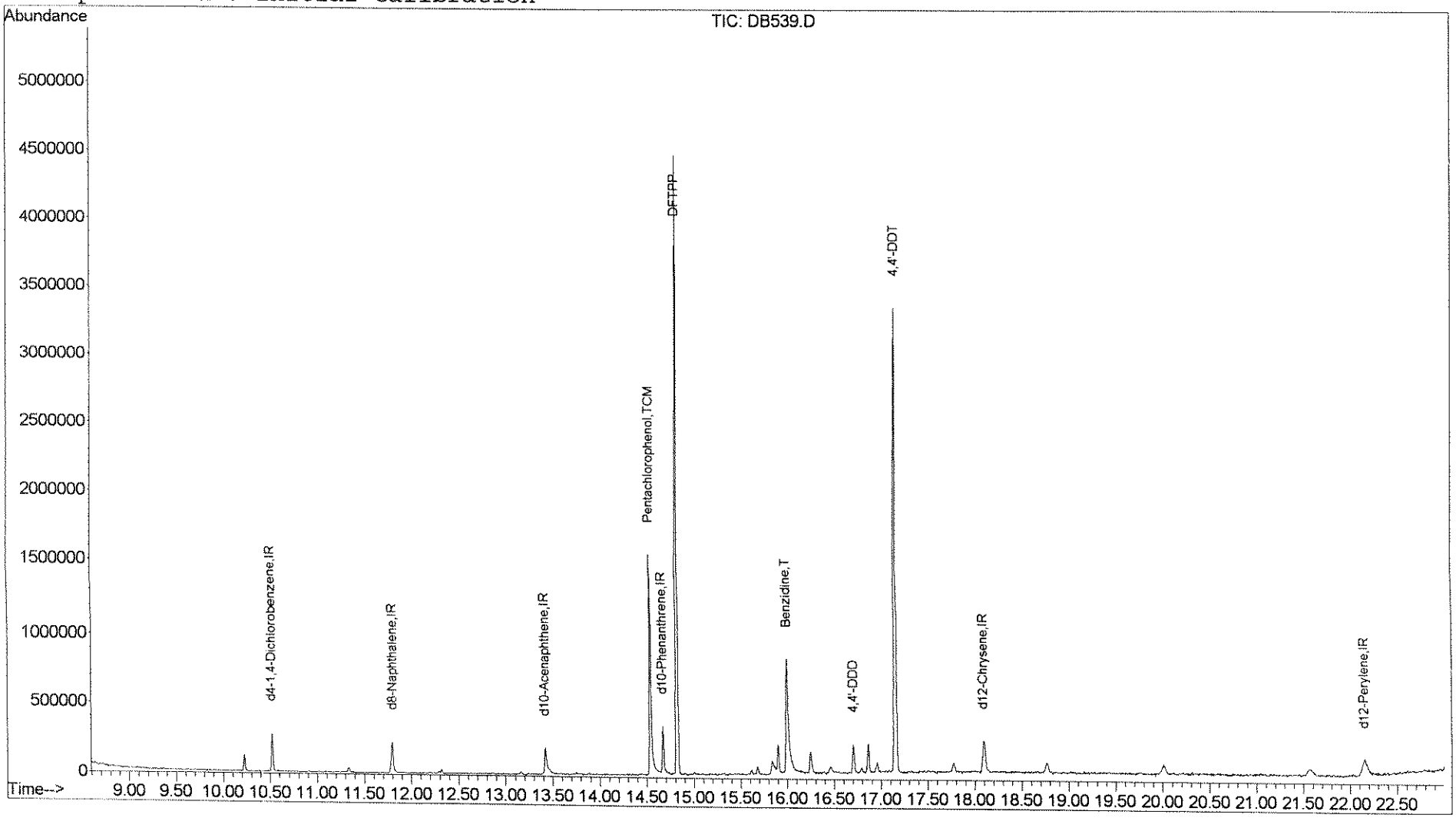
(#) = qualifier out of range (m) = manual integration
DB539.D DFTPPLVI.M Wed Sep 09 11:52:51 2009 Page 1

00283

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:52 2009 Quant Results File: DFTPPLVI.RES

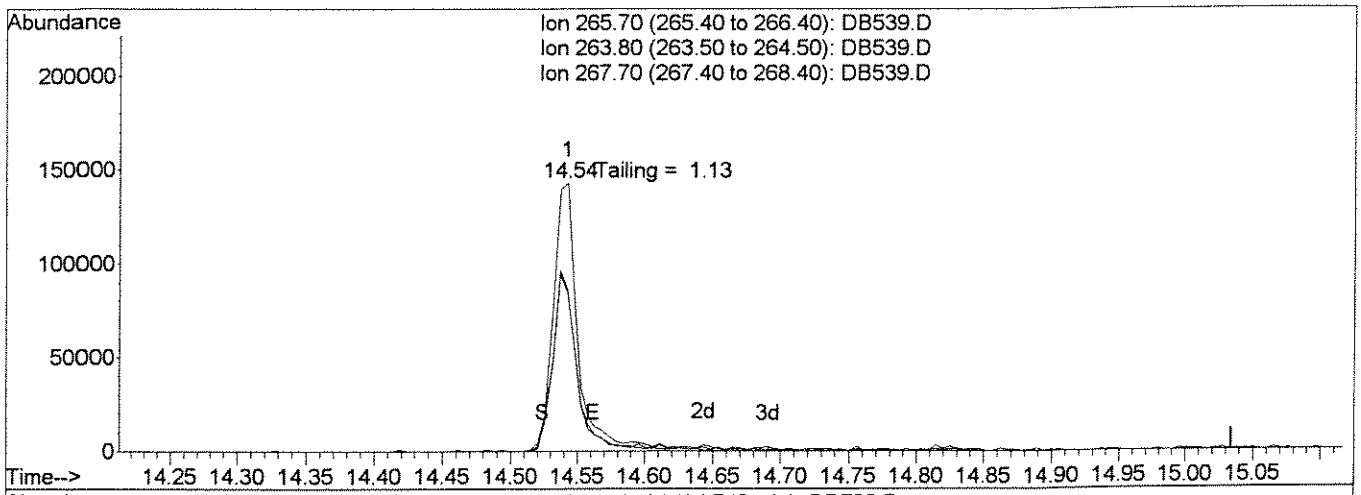
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Initial Calibration

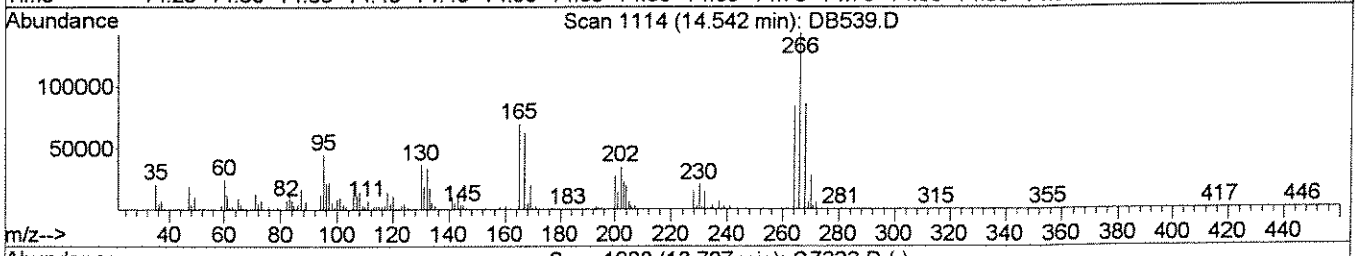


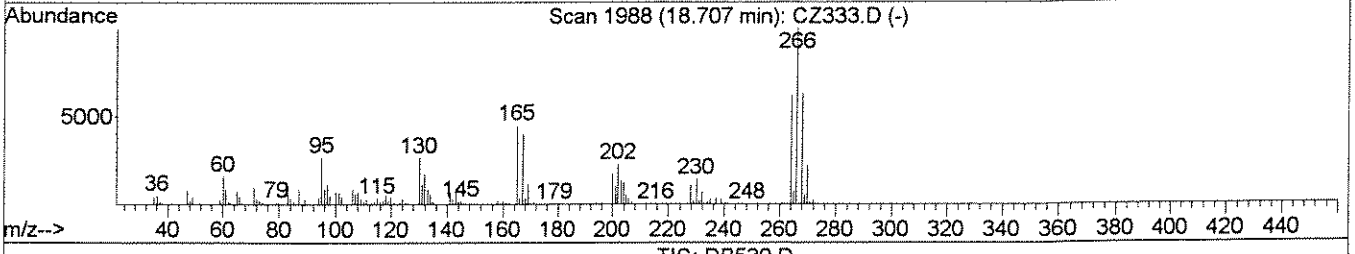
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 10:14 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration







TIC: DB539.D

(5) Pentachlorophenol (TCM)

14.54min 9.57ppb

response 187258

Ion	Exp%	Act%
265.70	100	100
263.80	64.20	58.93
267.70	63.50	59.59
0.00	0.00	0.00

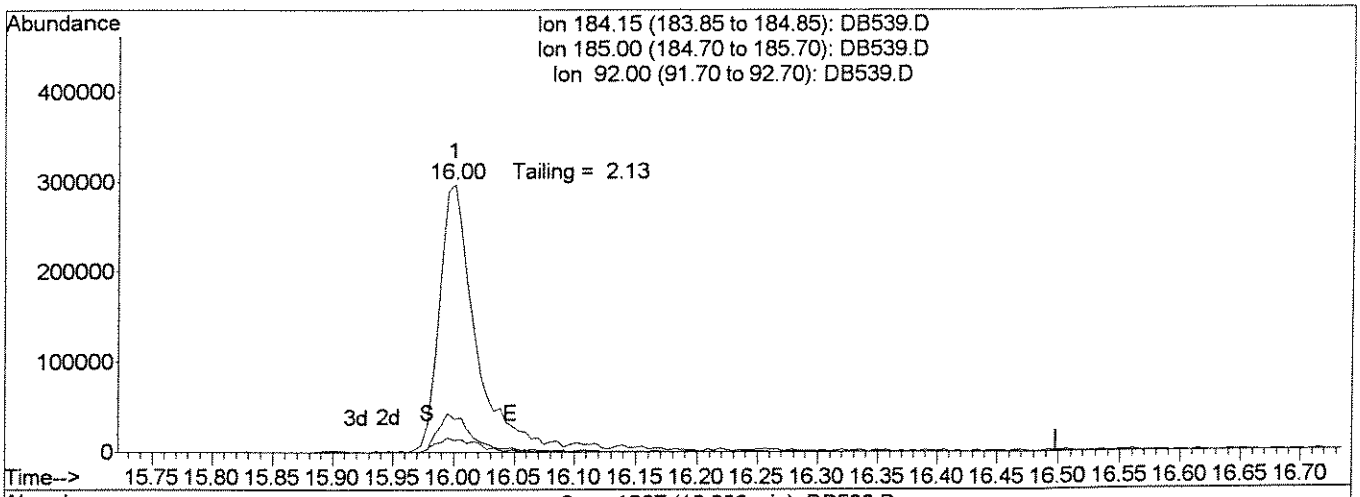
Quantitation Report (Qedit)

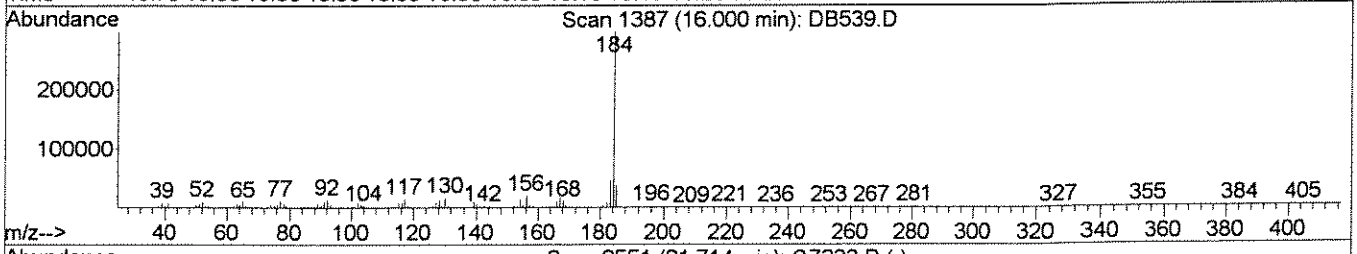
Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D
Acq On : 9 Sep 2009 9:51 am
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:52 2009

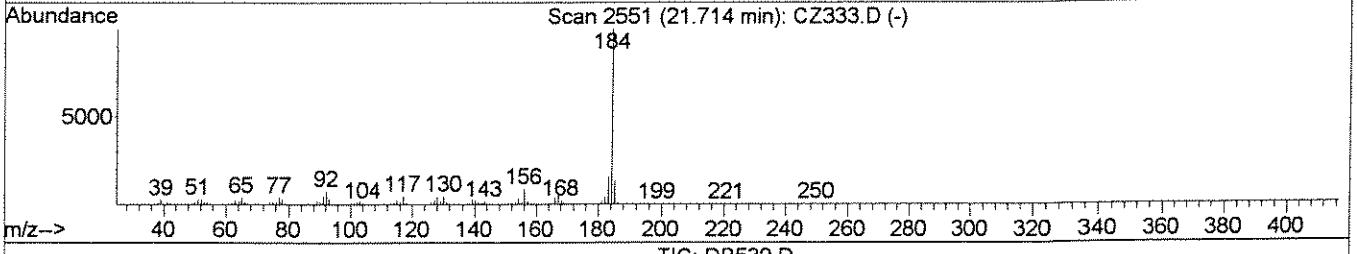
Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration







TIC: DB539.D

(11) Benzidine (T)

16.00min 8.58ppb

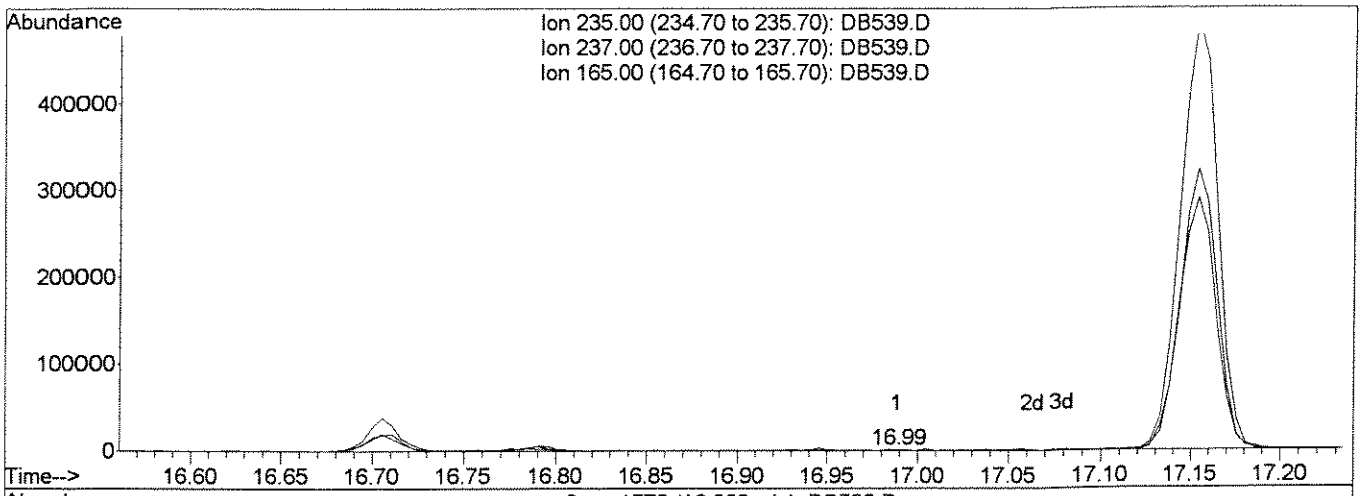
response 614597

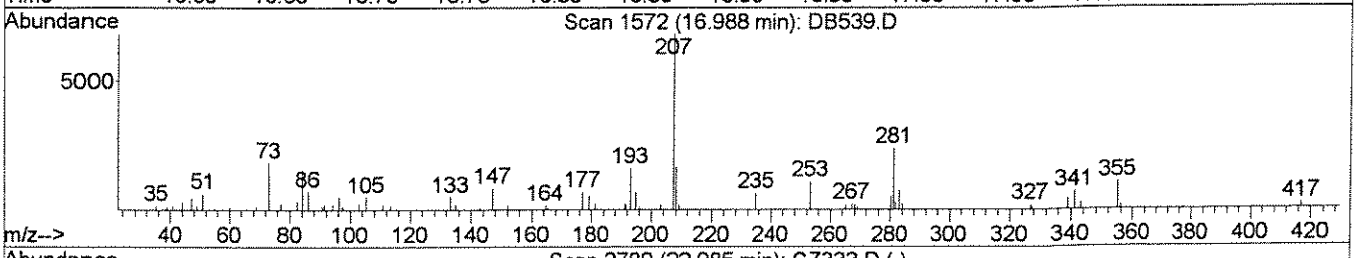
Ion	Exp%	Act%
184.15	100	100
185.00	15.00	12.49
92.00	5.30	4.34
0.00	0.00	0.00

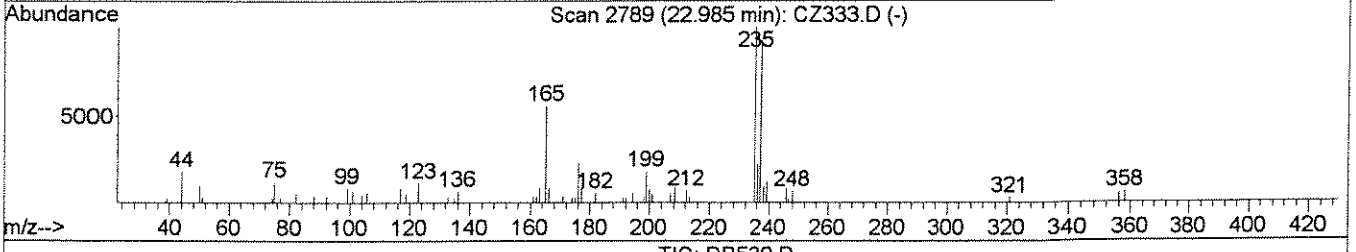
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:52 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration







TIC: DB539.D

(8) 4,4'-DDD

16.99min 12.99ppb

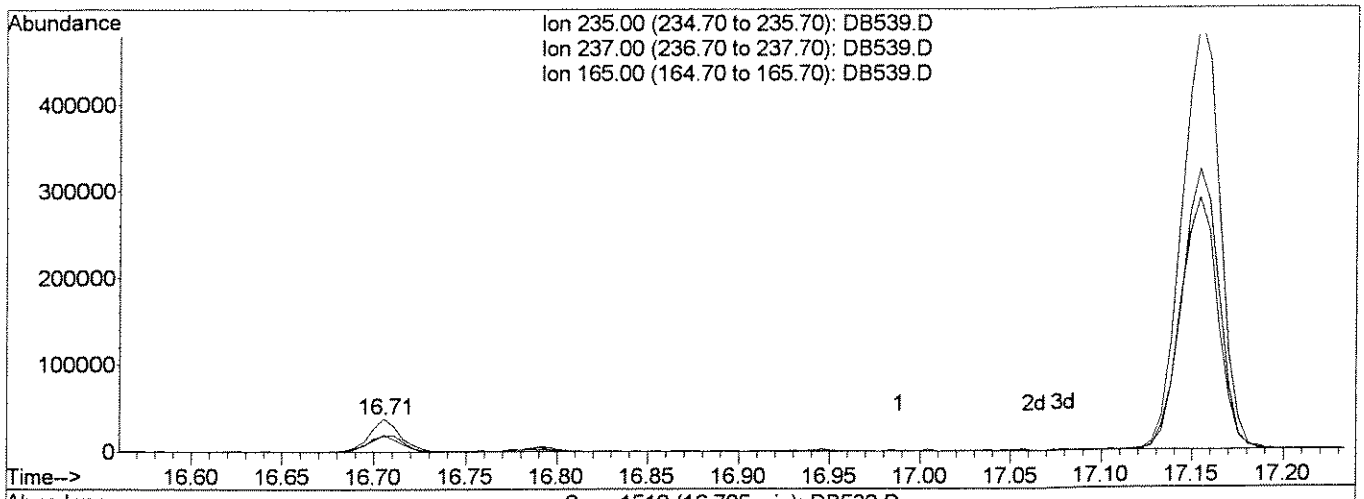
response 345

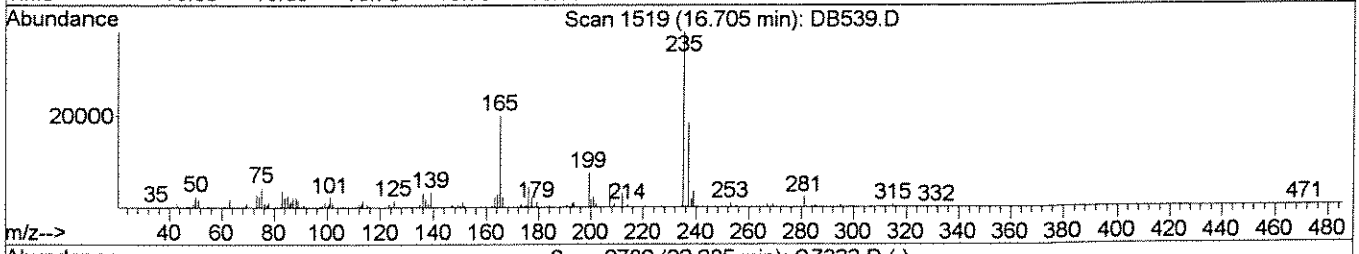
Ion	Exp%	Act%
235.00	100	100
237.00	0.00	0.00
165.00	0.00	0.00
0.00	0.00	0.00

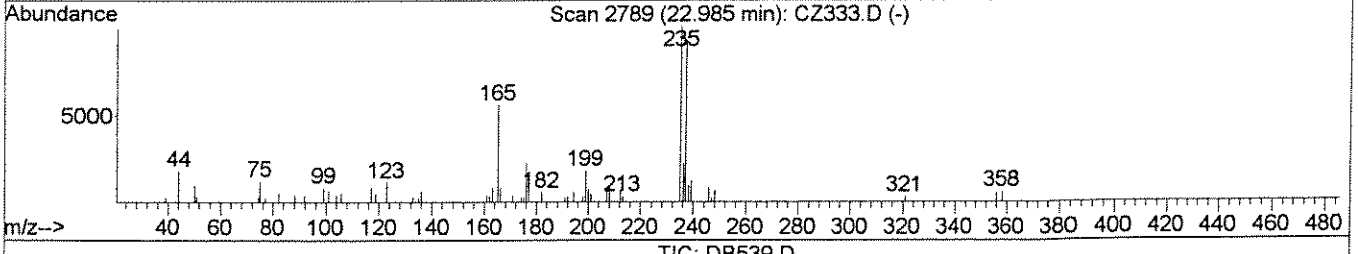
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 9 11:52 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration







TIC: DB539.D

(8) 4,4'-DDD

16.71min 1721.60ppb m

response 45728

Ion	Exp%	Act%
235.00	100	100
237.00	0.00	48.64#
165.00	0.00	52.97#
0.00	0.00	0.00

A JW 9/09/09

TIC: DB539.D

TUNE CHECK

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	8.820	rVB	0.048	16643	8.810	8.858
2	8.970	rBV	0.053	12283	8.948	9.002
3	9.087	rVB	0.027	10388	9.071	9.098
4	9.370	rVB	0.037	11088	9.360	9.397
5	9.493	rVB	0.037	10713	9.477	9.515
6	9.552	rBV	0.037	10972	9.536	9.573
7	9.579	rVV	0.032	8978	9.573	9.606
8	9.622	rVV	0.075	15806	9.606	9.680
9	9.862	rVV	0.043	8937	9.846	9.889
10	10.113	rBV	0.037	8772	10.092	10.129
11	10.225	rVB	0.102	157656	10.188	10.289
12	10.418	rBV	0.037	10743	10.396	10.434
13	10.519	rVV	0.085	339459	10.487	10.572
14	10.588	rVV	0.032	9912	10.572	10.605
15	10.909	rVB	0.043	10636	10.898	10.941
16	11.085	rBV	0.059	17616	11.053	11.112
17	11.176	rBV	0.048	14109	11.155	11.203
18	11.214	rVB	0.043	9813	11.203	11.246
19	11.272	rBV	0.043	13003	11.246	11.288
20	11.342	rVB	0.069	71628	11.294	11.363
21	11.384	rVB	0.032	11068	11.379	11.411
22	11.625	rVB	0.053	15779	11.598	11.652
23	11.801	rBV	0.107	391938	11.753	11.860
24	11.871	rVV	0.037	10116	11.860	11.897
25	11.924	rVB	0.037	8820	11.897	11.935
26	12.031	rBV	0.043	13686	12.015	12.058
27	12.132	rVB	0.043	12418	12.111	12.154
28	12.207	rBV	0.069	26803	12.154	12.223
29	12.293	rVV	0.053	20515	12.250	12.303
30	12.319	rVB	0.048	40537	12.303	12.351
31	12.768	rVB	0.043	11460	12.736	12.779
32	12.795	rBV	0.032	9441	12.779	12.811
33	12.859	rVB	0.059	15835	12.832	12.891
34	12.912	rBV	0.059	14637	12.891	12.950
35	13.083	rVB	0.048	13214	13.046	13.094
36	13.158	rVB	0.075	42838	13.131	13.206
37	13.233	rBV	0.048	23899	13.217	13.265
38	13.420	rBV	0.171	456939	13.366	13.537
39	13.585	rVB	0.032	9095	13.569	13.601
40	13.660	rVB	0.032	12692	13.639	13.671
41	13.698	rBV	0.037	10526	13.671	13.708
42	13.746	rVV	0.043	17990	13.730	13.772
43	13.810	rVB	0.027	9032	13.794	13.820
44	13.831	rBV	0.032	11253	13.820	13.853
45	13.885	rVV	0.037	12207	13.858	13.895
46	13.927	rBV	0.032	9291	13.917	13.949
47	14.243	rVB	0.037	10124	14.216	14.253
48	14.291	rVB	0.032	12765	14.269	14.301
49	14.323	rBV	0.032	10811	14.301	14.333
50	14.344	rBV	0.027	11141	14.333	14.360
51	14.446	rVB	0.037	15862	14.429	14.467
52	14.536	rBV	0.144	2118326	14.499	14.643
53	14.670	rVV	0.107	502434	14.643	14.750
54	14.819	rVB	0.102	4121597	14.771	14.873
55	14.900	rVB	0.037	21428	14.889	14.926
56	14.948	rBV	0.032	14940	14.926	14.958

57	15.001	rVB	0.048	18901	14.985	15.033
58	15.092	rVB	0.059	21404	15.071	15.129
59	15.156	rVB	0.032	12681	15.129	15.161
60	15.167	rBV	0.027	14068	15.161	15.188
61	15.193	rVB	0.037	11691	15.188	15.225
62	15.231	rVB	0.027	10537	15.225	15.252
63	15.263	rBV	0.037	18209	15.252	15.290
64	15.316	rVB	0.043	21159	15.290	15.332
65	15.391	rBV	0.053	33056	15.359	15.412
66	15.615	rVB	0.032	32266	15.599	15.631
67	15.680	rVB	0.085	91949	15.637	15.722
68	15.834	rBV	0.075	248367	15.802	15.877
69	15.899	rVV	0.069	311215	15.877	15.947
70	15.995	rVV	0.176	1791860	15.968	16.144
71	16.251	rVB	0.075	271971	16.224	16.299
72	16.459	rBV	0.085	157481	16.411	16.497
73	16.657	rBV	0.037	22205	16.641	16.679
74	16.705	rVB	0.075	308730	16.679	16.753
75	16.796	rVB	0.064	64589	16.764	16.828
76	16.860	rBV	0.069	301061	16.828	16.898
77	16.962	rBV	0.069	120380	16.930	16.999
78	17.154	rVB	0.123	4836754	17.117	17.239
79	17.298	rBV	0.032	24418	17.277	17.309
80	17.410	rBV	0.043	34644	17.400	17.442
81	17.464	rVV	0.032	20099	17.448	17.480
82	17.507	rBV	0.027	18975	17.491	17.517
83	17.603	rBV	0.021	18029	17.597	17.619
84	17.774	rVB	0.064	113225	17.742	17.806
85	17.880	rBV	0.027	19772	17.864	17.891
86	18.094	rBV	0.123	547703	18.057	18.180
87	18.548	rBV	0.032	14944	18.532	18.564
88	18.666	rBV	0.043	21393	18.655	18.698
89	18.762	rVB	0.102	260398	18.725	18.826
90	18.842	rBV	0.027	26502	18.826	18.853
91	19.237	rBV	0.037	17019	19.221	19.259
92	19.932	rBV	0.037	36917	19.921	19.959
93	20.007	rVB	0.128	262015	19.959	20.087
94	20.311	rVB	0.027	13344	20.295	20.322
95	20.744	rBV	0.027	16070	20.733	20.760
96	21.038	rBV	0.021	10471	21.032	21.054
97	21.145	rVB	0.032	16793	21.139	21.171
98	21.577	rBV	0.155	255110	21.518	21.673
99	21.818	rBV	0.037	18756	21.807	21.844
100	22.149	rBV	0.134	445476	22.095	22.229

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D Vial: 1
Acq On : 10 Sep 2009 12:21 pm Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:26 2009 Quant Results File: DFTPPLVI.RES

Quant Method : J:\ACQUDATA\5...\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Initial Calibration
DataAcq Meth : DFTPPLVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.52	152	38908	1.00	ppb	0.00
2) d8-Naphthalene	11.79	136	158249	1.00	ppb	0.00
3) d10-Acenaphthene	13.42	164	84717m	1.00	ppb	0.00
4) d10-Phenanthrene	14.67	188	161582	1.00	ppb	0.00
10) d12-Chrysene	18.10	240	188642	1.00	ppb	0.00
12) d12-Perylene	22.16	264	121254	1.00	ppb	0.00
Target Compounds						Qvalue
5) Pentachlorophenol	14.54	266	223009	10.52	ppb	97
6) DFTPP	14.82	198	331397m	9.33	ppb	
9) 4,4'-DDT	17.16	235	867841	10.83	ppb	97
11) Benzidine	16.00	184	658439	8.45	ppb	97

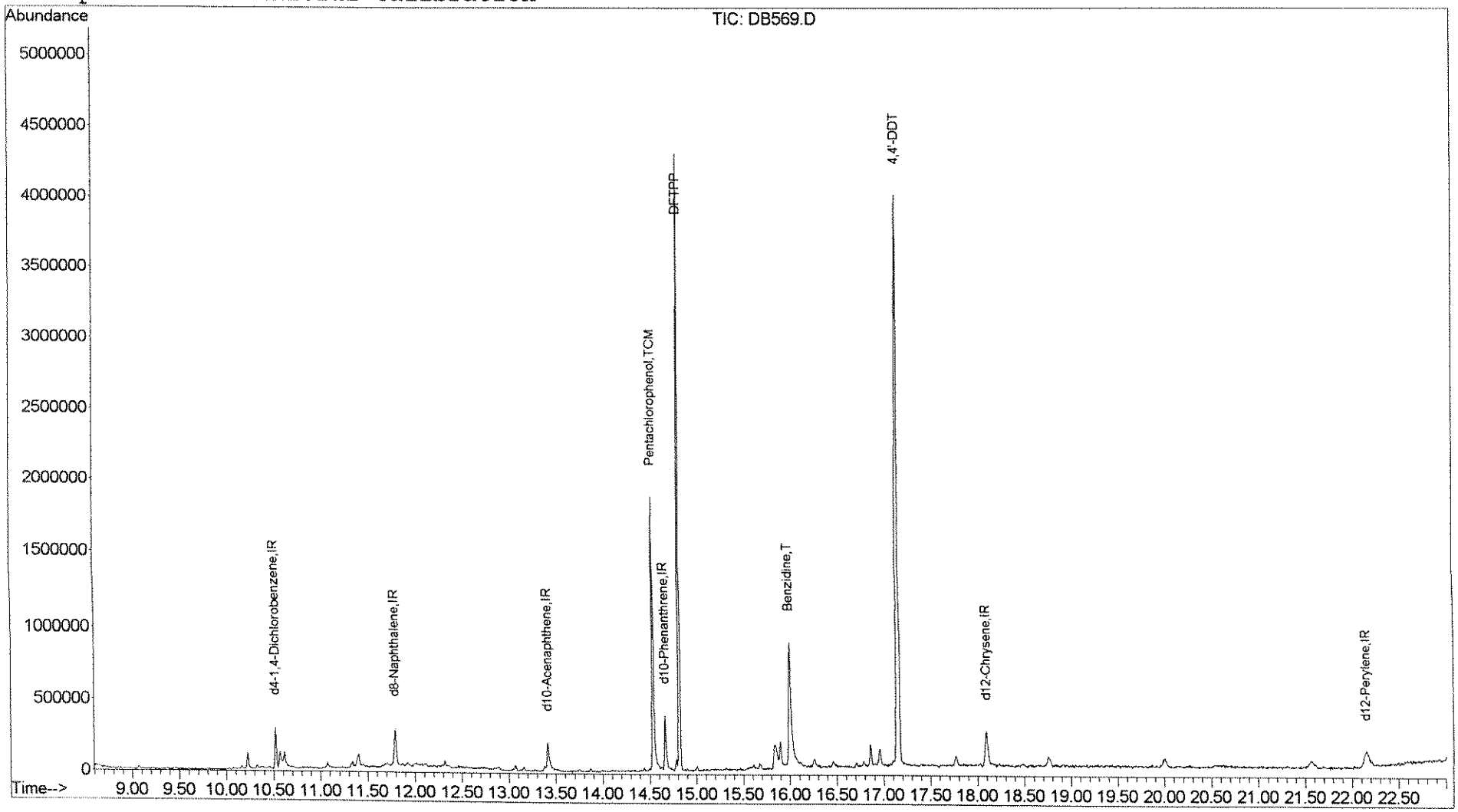
(#) = qualifier out of range (m) = manual integration
DB569.D DFTPPLVI.M Thu Sep 10 16:26:53 2009 Page 1

00291

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D Vial: 1
Acq On : 10 Sep 2009 12:21 pm Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:26 2009 Quant Results File: DFTPPLVI.RES

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Initial Calibration



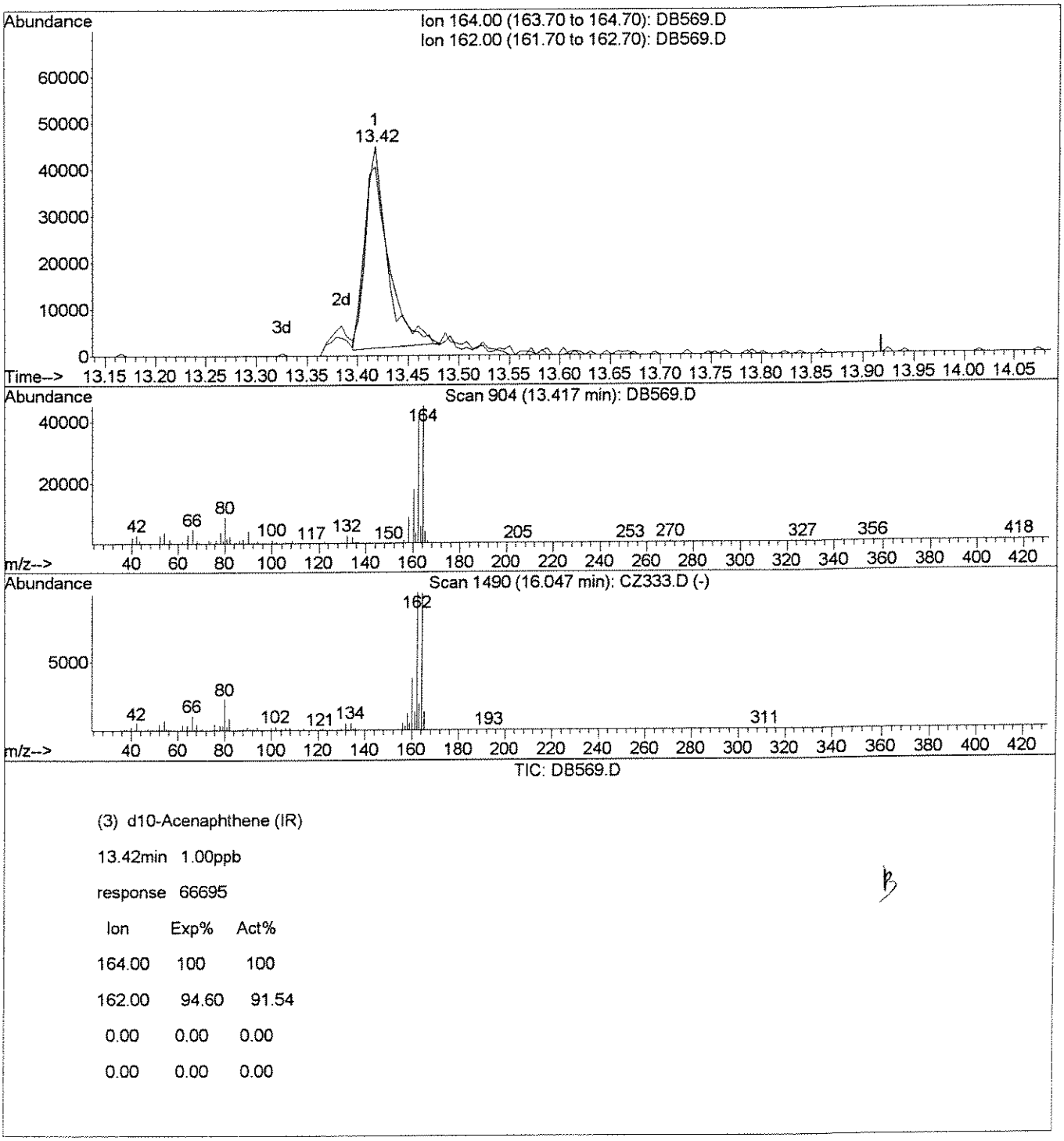
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D
Acq On : 10 Sep 2009 12:21 pm
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Sep 10 12:44 2009

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration



TIC: DB569.D

(3) d10-Acenaphthene (IR)

13.42min 1.00ppb

response 66695

Ion	Exp%	Act%
164.00	100	100
162.00	94.60	91.54
0.00	0.00	0.00
0.00	0.00	0.00

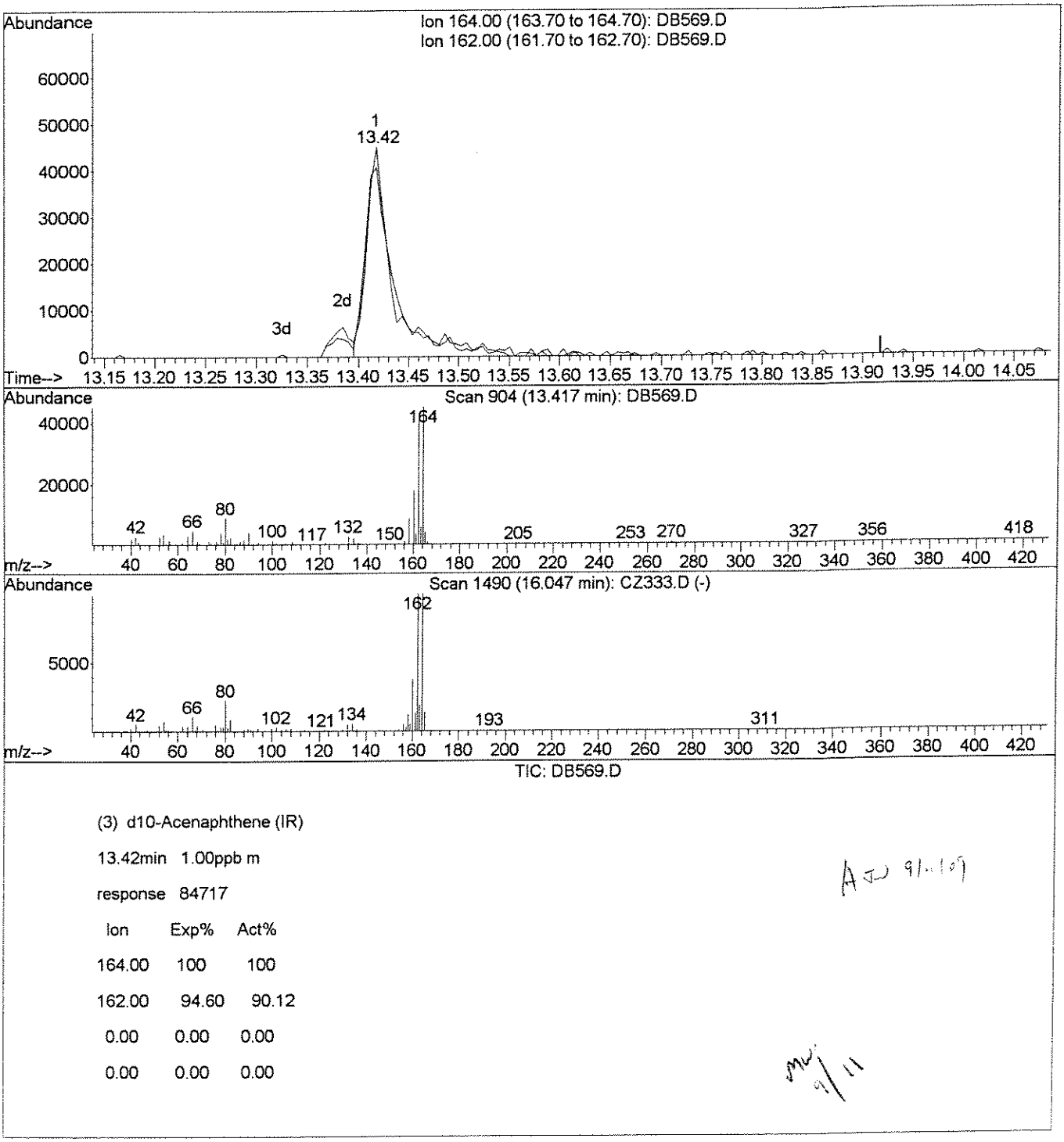
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D
Acq On : 10 Sep 2009 12:21 pm
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:18 2009

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration



TIC: DB569.D

(3) d10-Acenaphthene (IR)

13.42min 1.00ppb m

response 84717

Ion	Exp%	Act%
164.00	100	100
162.00	94.60	90.12
0.00	0.00	0.00
0.00	0.00	0.00

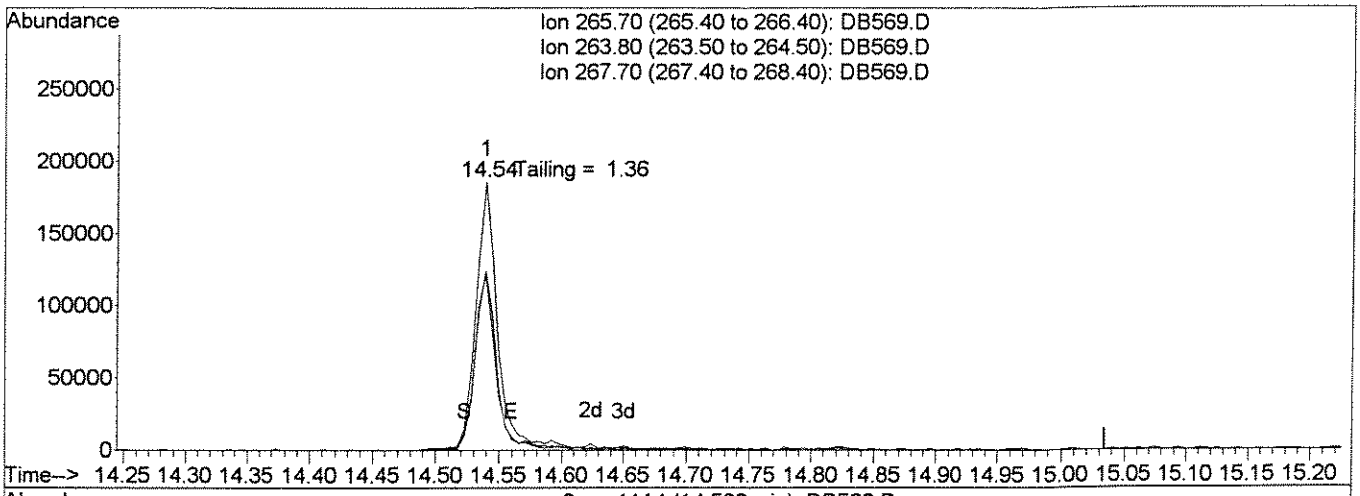
AJ 9/10/09

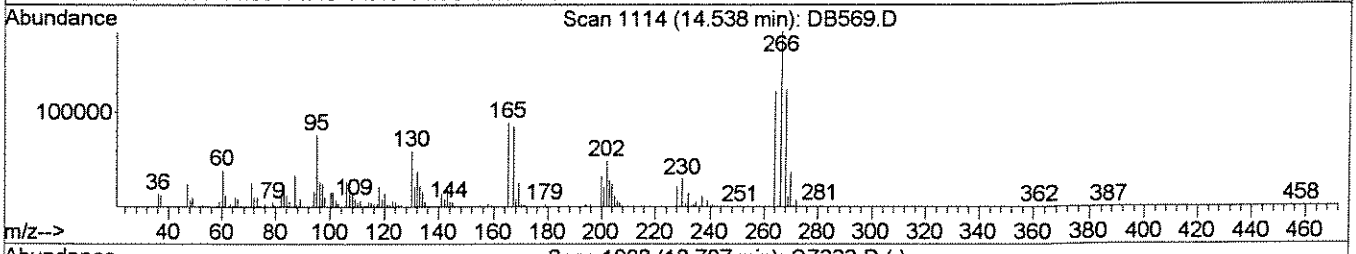
MW 9/11

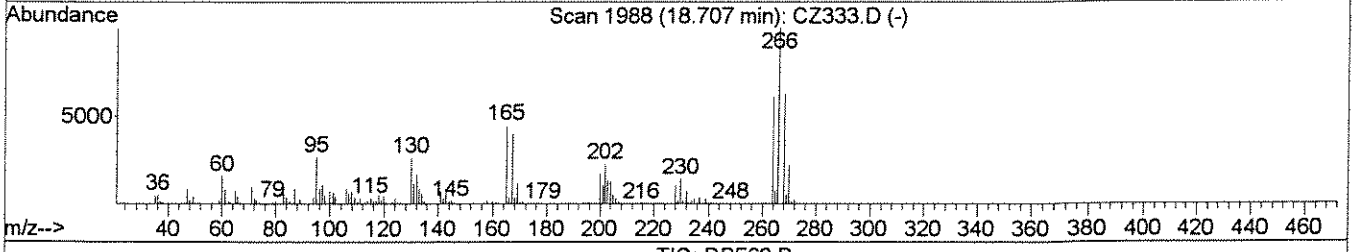
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D Vial: 1
Acq On : 10 Sep 2009 12:21 pm Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:18 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration







TIC: DB569.D

(5) Pentachlorophenol (TCM)

14.54min 10.52ppb

response 223009

Ion	Exp%	Act%
265.70	100	100
263.80	64.20	65.80
267.70	63.50	66.86
0.00	0.00	0.00

DB569.D DFTPPLVI.M Thu Sep 10 16:26:06 2009

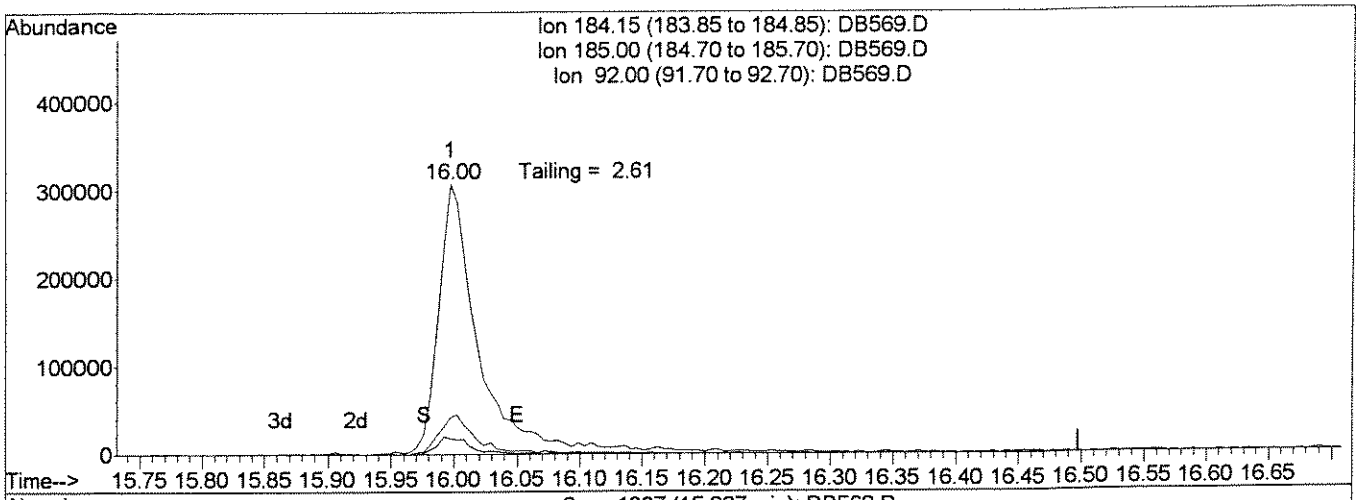
Quantitation Report (Qedit)

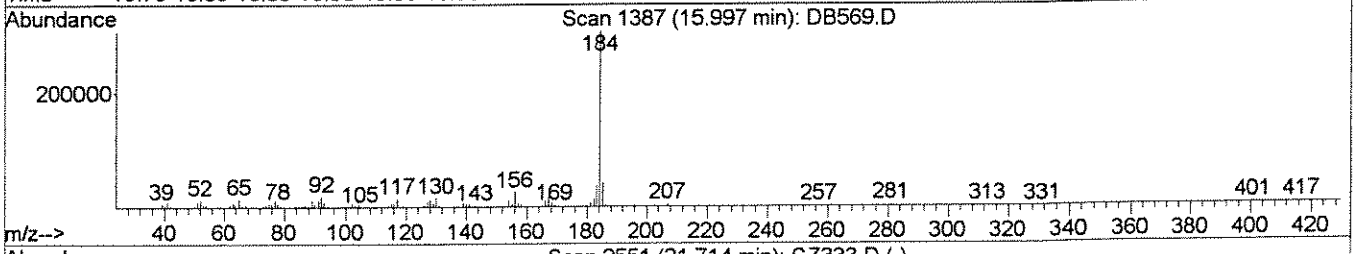
Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D
Acq On : 10 Sep 2009 12:21 pm
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:26 2009

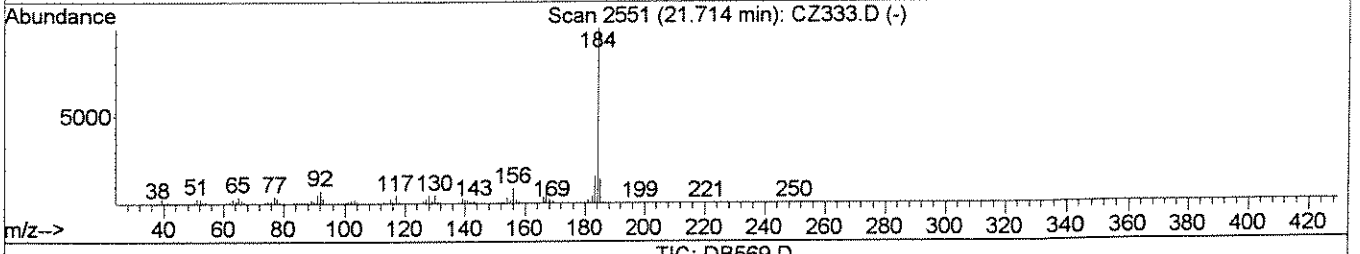
Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration







TIC: DB569.D

(11) Benzidine (T)

16.00min 8.45ppb

response 658439

Ion	Exp%	Act%
184.15	100	100
185.00	15.00	13.57
92.00	5.30	5.74
0.00	0.00	0.00

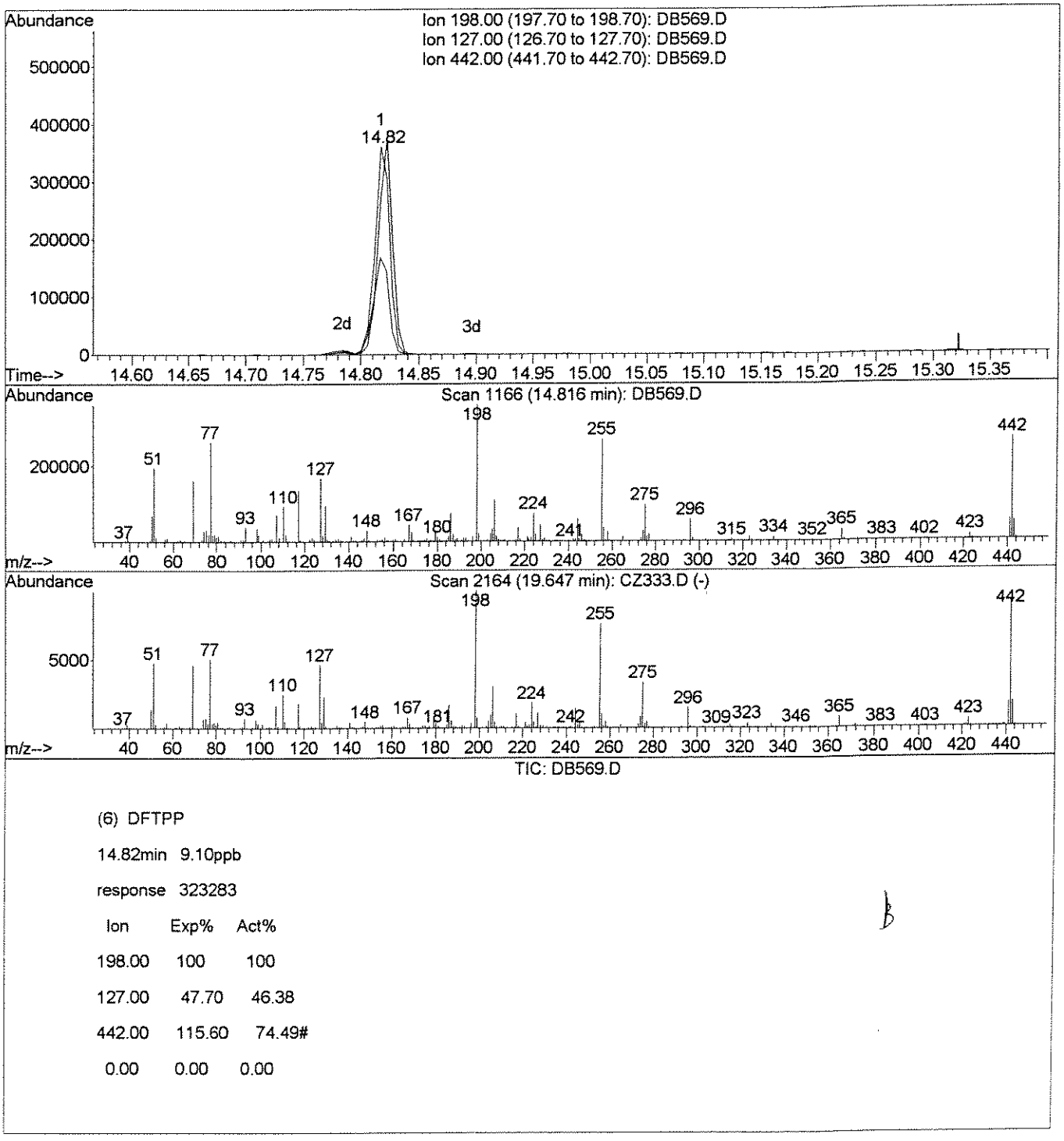
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D
Acq On : 10 Sep 2009 12:21 pm
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:18 2009

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration



TIC: DB569.D

(6) DFTPP

14.82min 9.10ppb

response 323283

Ion	Exp%	Act%
198.00	100	100
127.00	47.70	46.38
442.00	115.60	74.49#
0.00	0.00	0.00

DB569.D DFTPPLVI.M Thu Sep 10 16:26:12 2009

00297

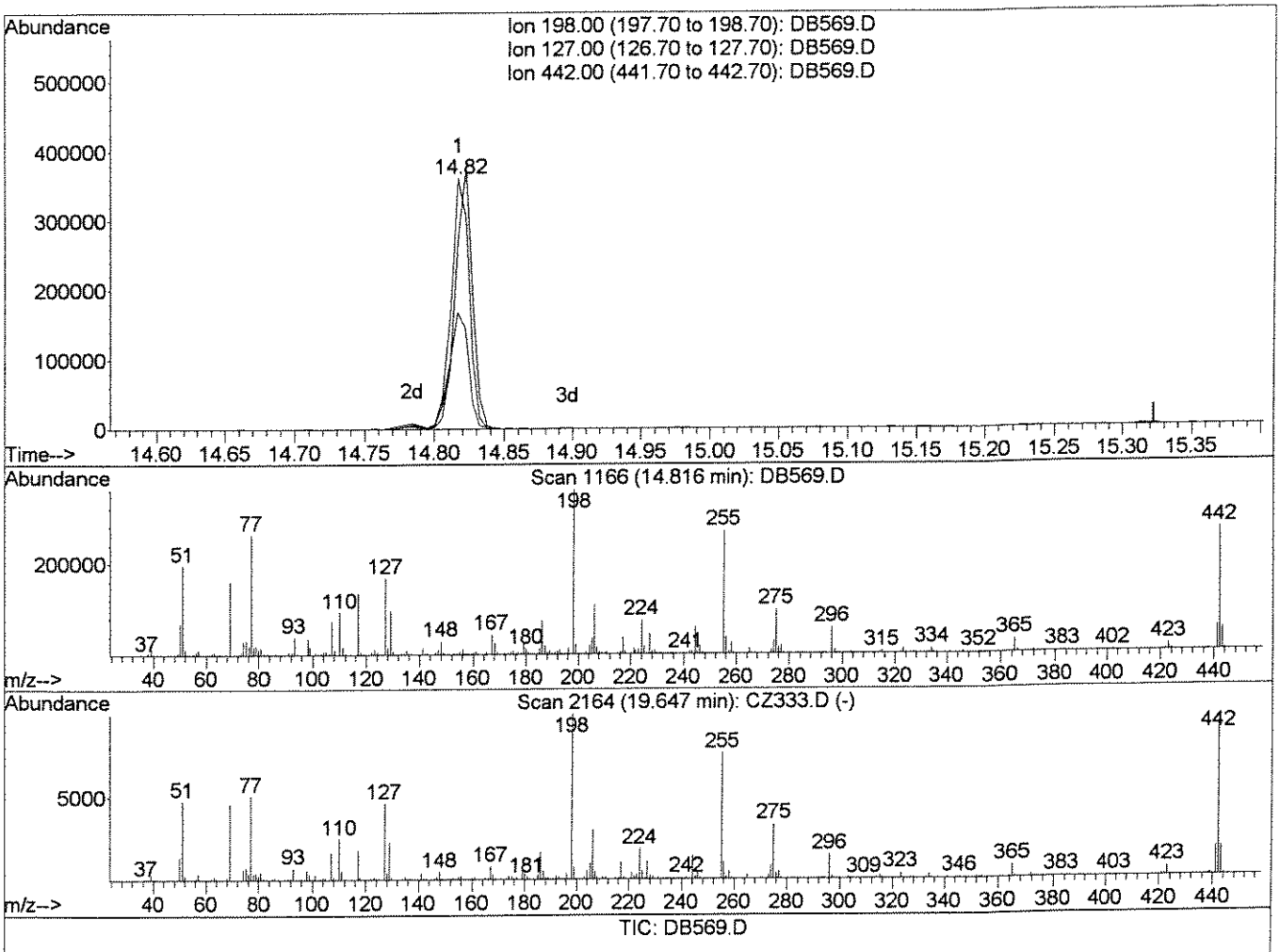
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D
Acq On : 10 Sep 2009 12:21 pm
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Quant Time: Sep 10 16:26 2009

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Tue Sep 08 08:20:44 2009
Response via : Single Level Calibration



TIC: DB569.D

(6) DFTPP

14.82min 9.33ppb m

response 331397

Ion	Exp%	Act%
198.00	100	100
127.00	47.70	46.43
442.00	115.60	74.50#
0.00	0.00	0.00

AJW 9/11/09

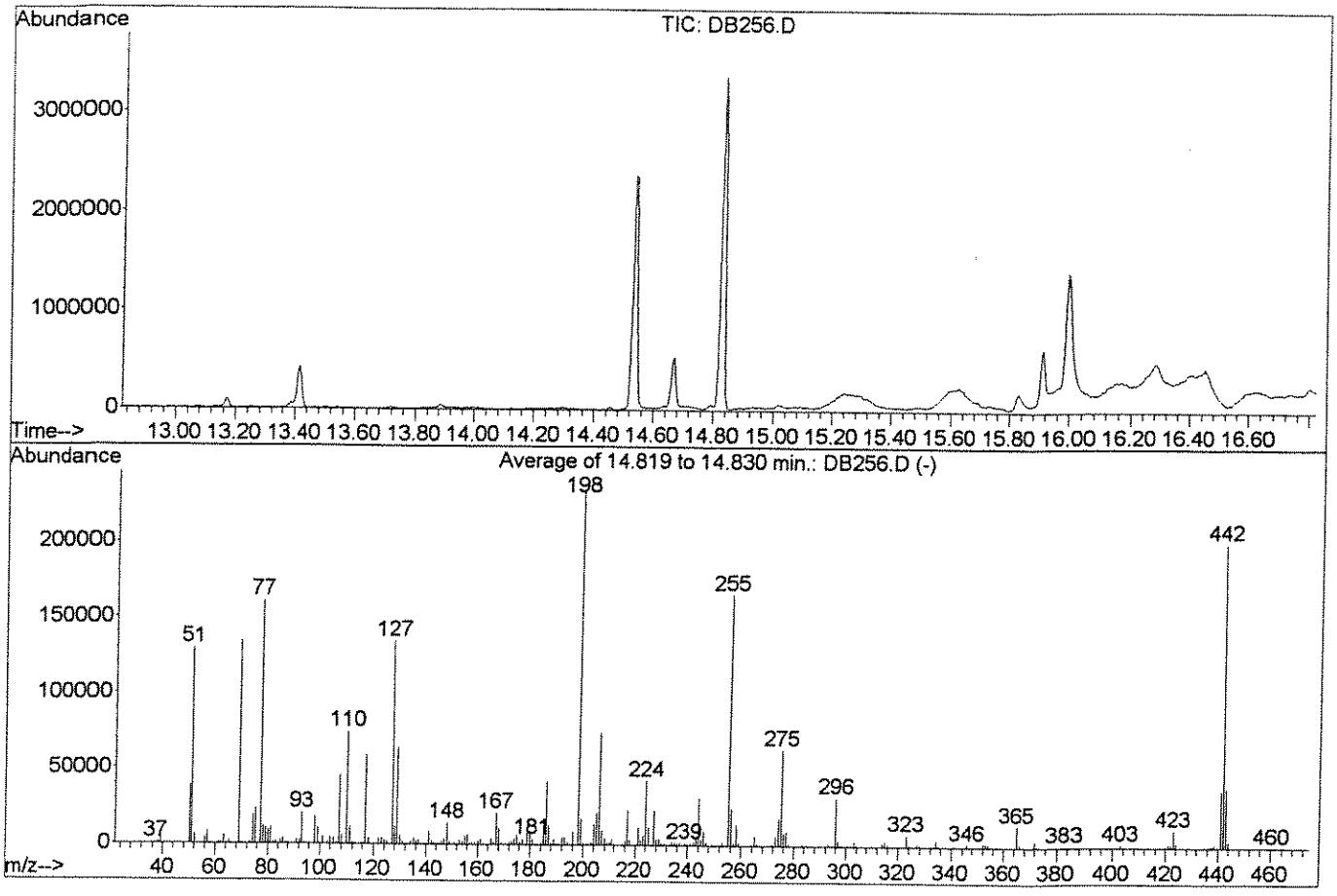
SEMIVOLATILE ORGANICS

RAW QC DATA

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\081909\DB256.D
Acq On : 19 Aug 2009 10:26 am
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

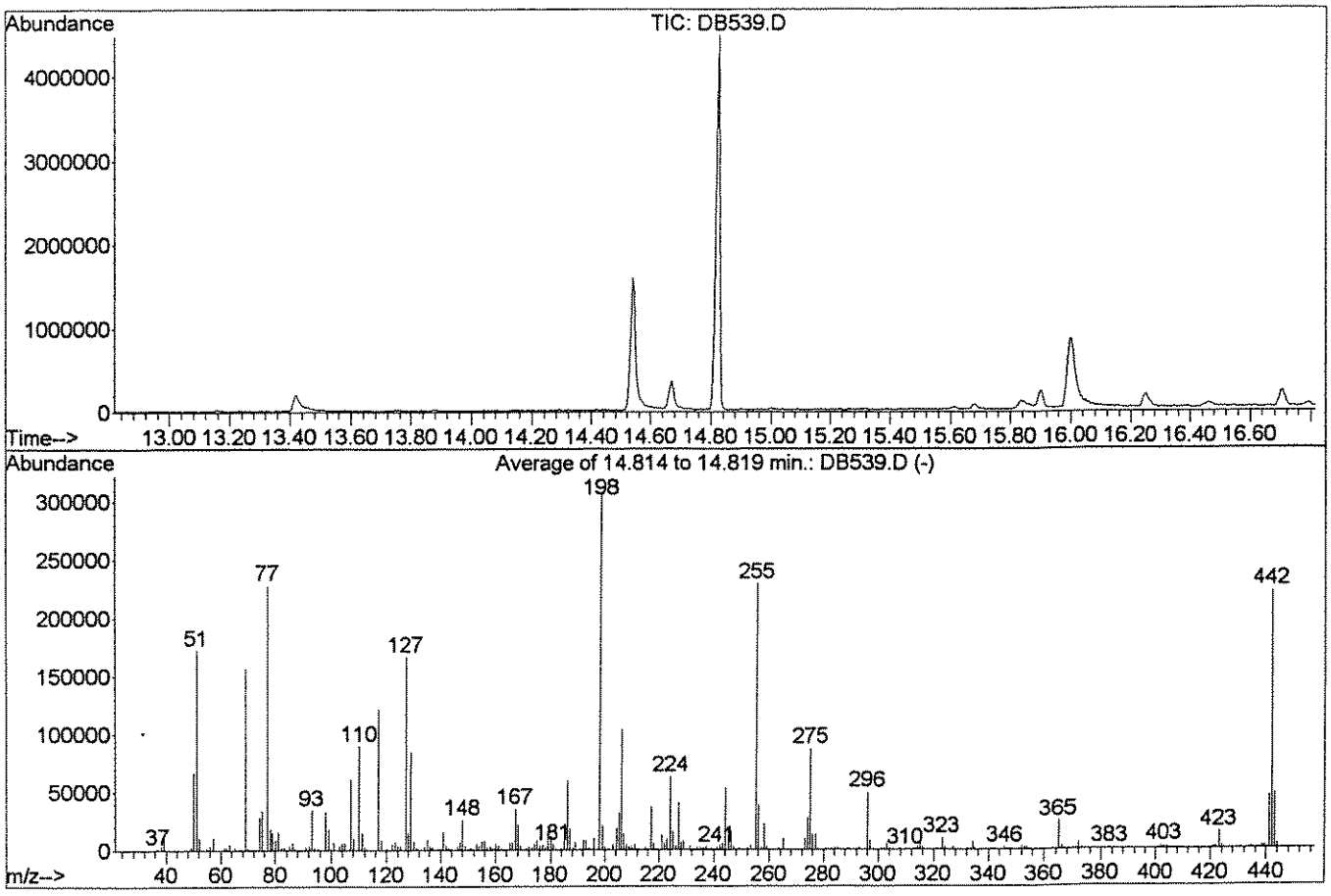


AutoFind: Scans 1166, 1167, 1168; Background Corrected with Scan 1162

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	55.0	129211	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	57.3	134537	PASS
70	69	0.00	2	0.6	824	PASS
127	198	40	60	57.2	134408	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	234917	PASS
199	198	5	9	7.4	17313	PASS
275	198	10	30	26.8	63039	PASS
365	198	1	100	5.9	13816	PASS
441	443	0.01	100	95.8	37444	PASS
442	198	40	100	85.7	201412	PASS
443	442	17	23	19.4	39088	PASS

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\090909\DB539.D Vial: 1
Acq On : 9 Sep 2009 9:51 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



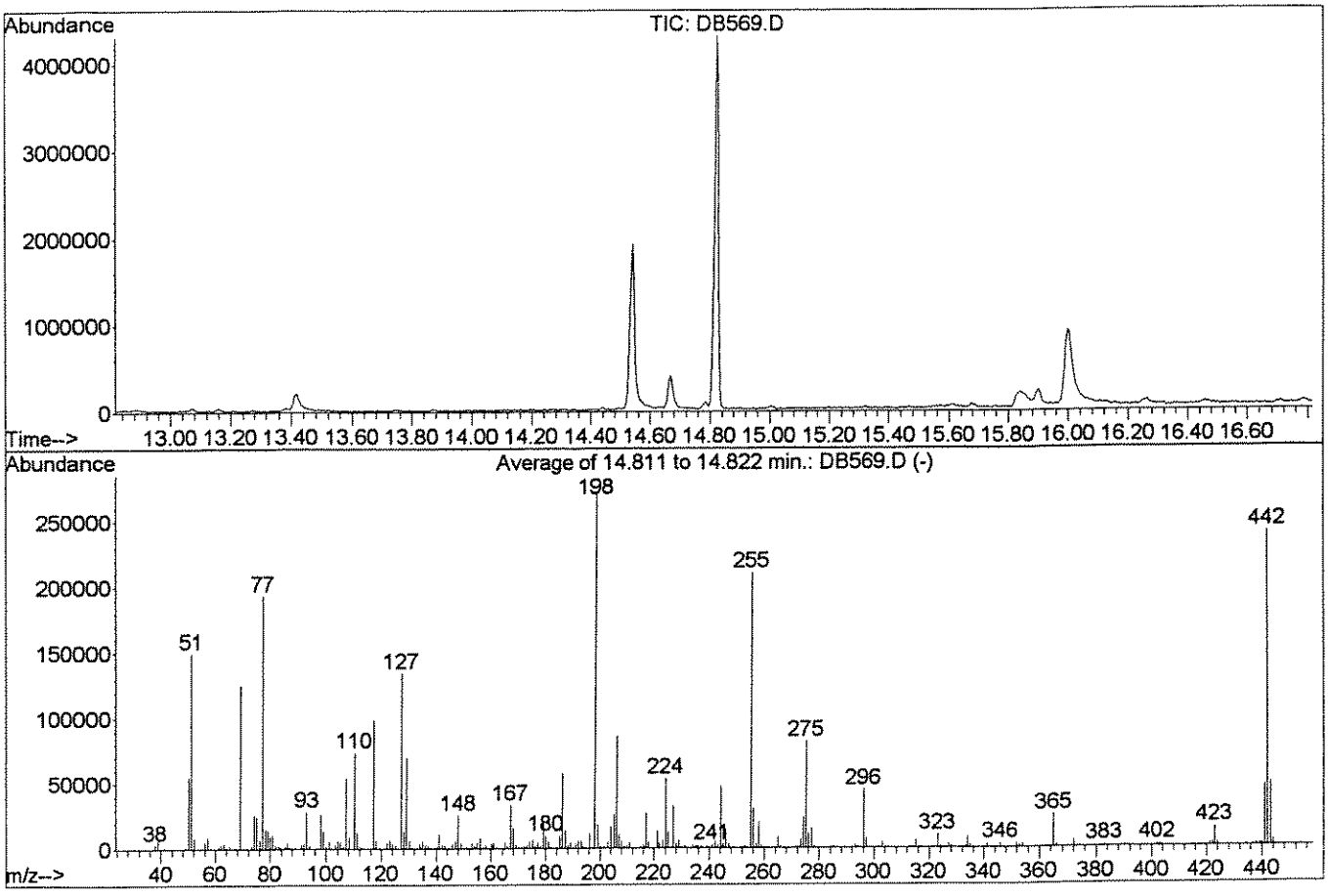
Spectrum Information: Average of 14.814 to 14.819 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	56.1	172651	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.0	156876	PASS
70	69	0.00	2	0.9	1443	PASS
127	198	40	60	54.1	166303	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	307488	PASS
199	198	5	9	6.6	20342	PASS
275	198	10	30	28.2	86792	PASS
365	198	1	100	7.9	24222	PASS
441	443	0.01	100	95.6	45968	PASS
442	198	40	100	72.2	221888	PASS
443	442	17	23	21.7	48092	PASS

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\091009\DB569.D
Acq On : 10 Sep 2009 12:21 pm
Sample : TUNE CHECK
Misc : 10 ng DFTPP
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS

Vial: 1
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00



AutoFind: Scans 1165, 1166, 1167; Background Corrected with Scan 1161

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.8	149184	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.9	124906	PASS
70	69	0.00	2	0.4	499	PASS
127	198	40	60	49.3	134235	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	272124	PASS
199	198	5	9	6.6	17893	PASS
275	198	10	30	29.9	81230	PASS
365	198	1	100	9.1	24638	PASS
441	443	0.01	100	96.2	46123	PASS
442	198	40	100	88.2	240080	PASS
443	442	17	23	20.0	47927	PASS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ0908092-01

Units: µg/L
Basis: NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/9/09 21:10	95122	169753	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/9/09 21:10	95122	169753	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/9/09 21:10	95122	169753	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/9/09 21:10	95122	169753	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/9/09 21:10	95122	169753	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/9/09 21:10	95122	169753	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	9/ 2/09	9/9/09 21:10	95122	169753	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/9/09 21:10	95122	169753	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/9/09 21:10	95122	169753	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/9/09 21:10	95122	169753	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/9/09 21:10	95122	169753	
Diethyl Phthalate	0.20	U	5.0	0.20	1	9/ 2/09	9/9/09 21:10	95122	169753	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/9/09 21:10	95122	169753	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/9/09 21:10	95122	169753	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/9/09 21:10	95122	169753	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/9/09 21:10	95122	169753	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/9/09 21:10	95122	169753	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/9/09 21:10	95122	169753	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/9/09 21:10	95122	169753	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/9/09 21:10	95122	169753	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/9/09 21:10	95122	169753	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/9/09 21:10	95122	169753	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/9/09 21:10	95122	169753	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/9/09 21:10	95122	169753	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908092-01	**Basis:**	NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	81	45-135	9/9/09 21:10		
Nitrobenzene-d5	80	45-135	9/9/09 21:10		
p-Terphenyl-d14	84	45-135	9/9/09 21:10		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB555.D Vial: 16
Acq On : 9 Sep 2009 9:10 pm Operator: J.Wu
Sample : RQ0908092-01|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP BLK Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:24 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	51647	1.00	ppm	0.00
4) d8-Naphthalene	12.10	136	192142	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	101572	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	159217	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	185249	1.00	ppm	0.00
33) d12-Perylene	22.43	264	120330	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	124727	1.60	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 80.00%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	223013	1.62	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 81.00%			
28) SURR6,TERPHENYL-D14	16.60	244	257280	1.67	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 83.50%			
Target Compounds						Qvalue

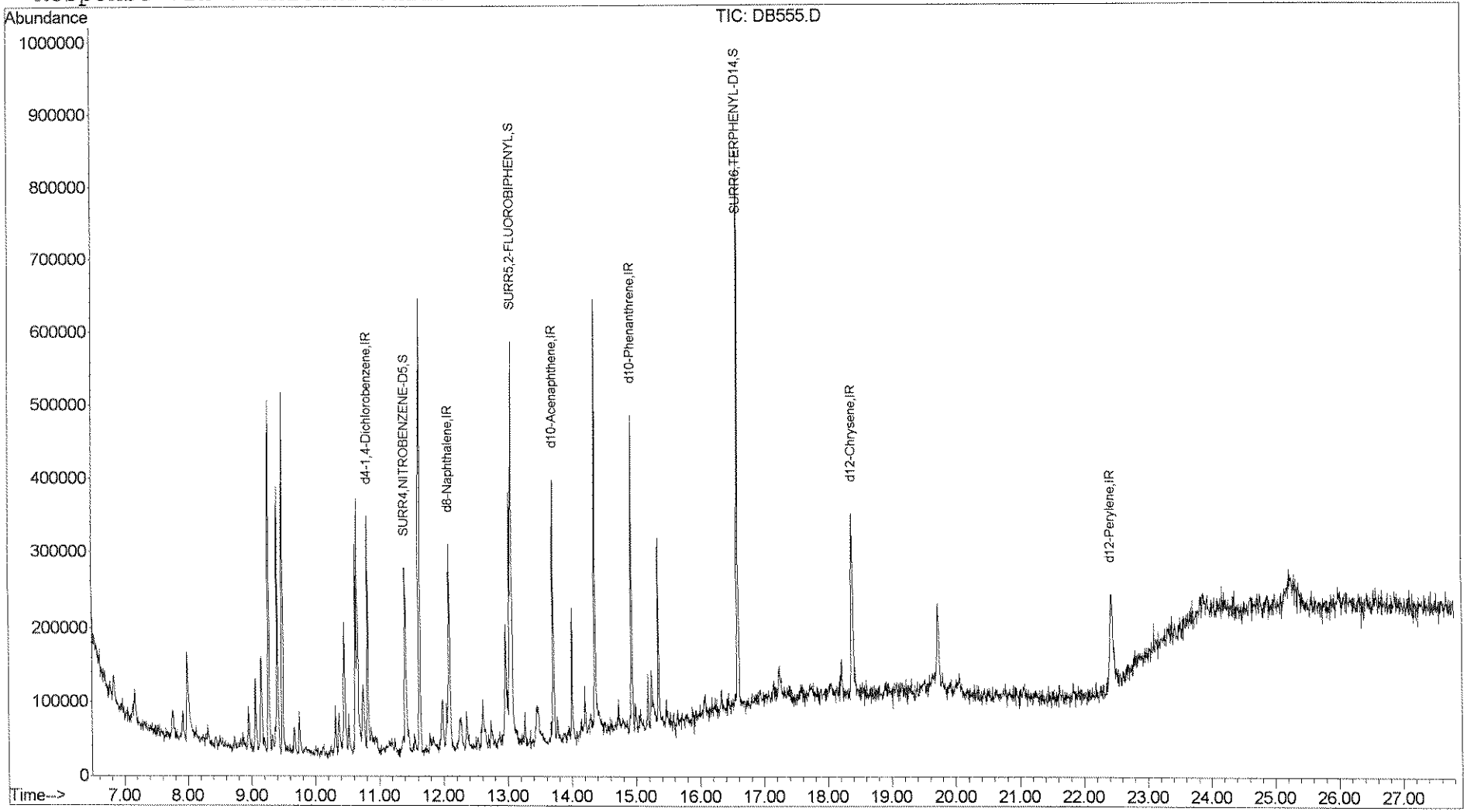
(#) = qualifier out of range (m) = manual integration
DB555.D LVI0819.M Thu Sep 10 10:24:55 2009 Page 1

00305

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB555.D Vial: 16
Acq On : 9 Sep 2009 9:10 pm Operator: J.Wu
Sample : RQ0908092-01|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP BL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:24 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908042-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 17:01	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 17:01	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 17:01	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 17:01	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:01	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 17:01	95122	169951	
Butyl Benzyl Phthalate	**0.19**	J	5.0	0.11	1	9/ 2/09	9/10/09 17:01	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:01	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 17:01	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 17:01	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:01	95122	169951	
Diethyl Phthalate	0.20	U	5.0	0.20	1	9/ 2/09	9/10/09 17:01	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 17:01	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 17:01	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 17:01	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 17:01	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 17:01	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 17:01	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:01	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 17:01	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:01	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 17:01	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 17:01	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 17:01	95122	169951	

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908042-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	89	45-135	9/10/09 17:01		
Nitrobenzene-d5	96	45-135	9/10/09 17:01		
p-Terphenyl-d14	95	45-135	9/10/09 17:01		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB574.D Vial: 5
Acq On : 10 Sep 2009 5:01 pm Operator: J.Wu
Sample : RQ0908042-01|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL EQBLK1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:46 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	44419	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	159382	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	88879	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	167339	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	193592	1.00	ppm	0.00
33) d12-Perylene	22.42	264	125622	1.00	ppm	-0.01
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.40	82	123343	1.91	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 95.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	213775	1.78	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 89.00%			
28) SURR6,TERPHENYL-D14	16.59	244	305566	1.90	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 95.00%			
Target Compounds						Qvalue
29) Butyl benzyl phthalate	17.24	149	25165	0.20	ppm	92

(#) = qualifier out of range (m) = manual integration
DB574.D LVI0819.M Fri Sep 11 08:46:55 2009 Page 1

00309

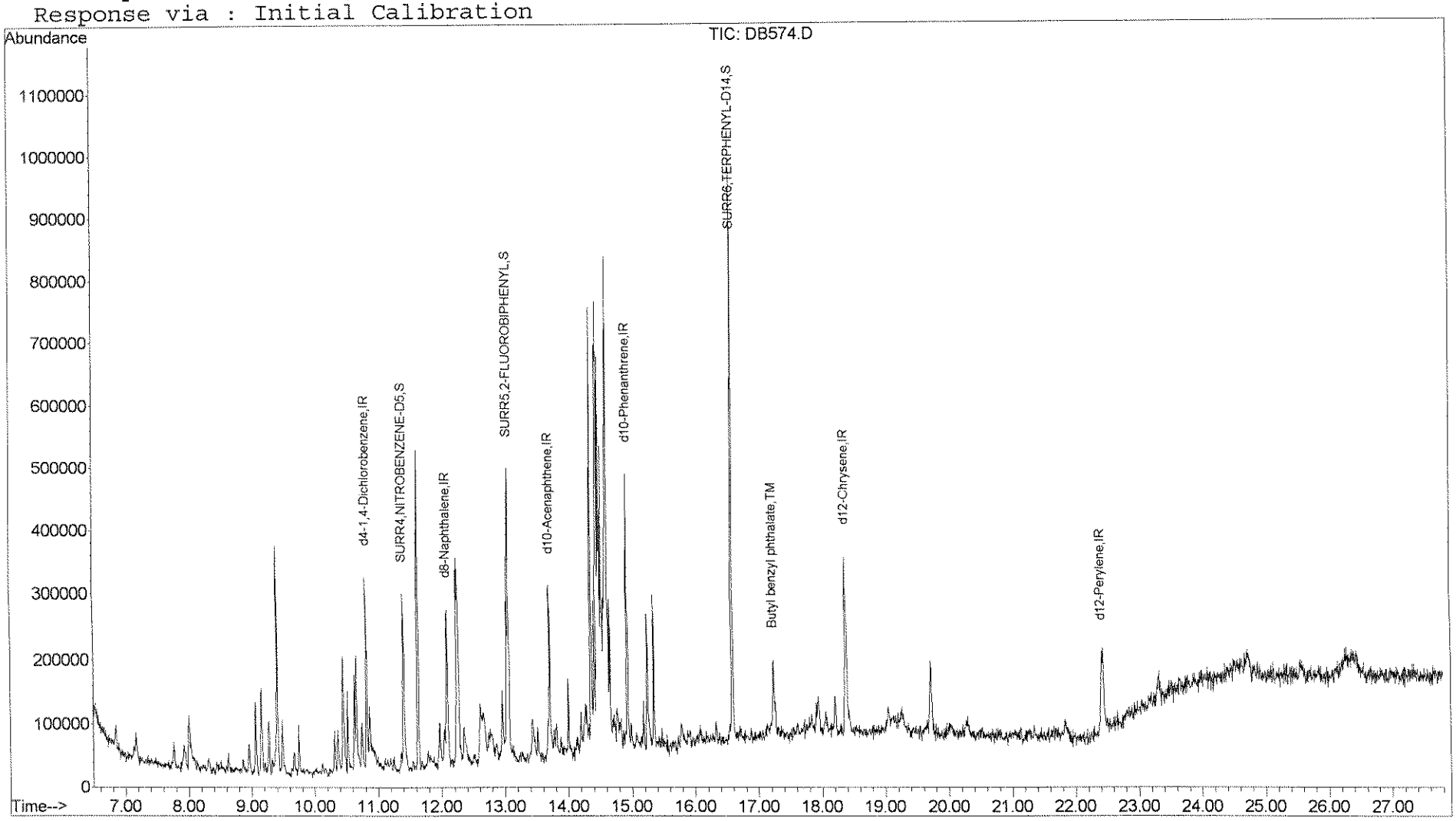
Quantitation Report

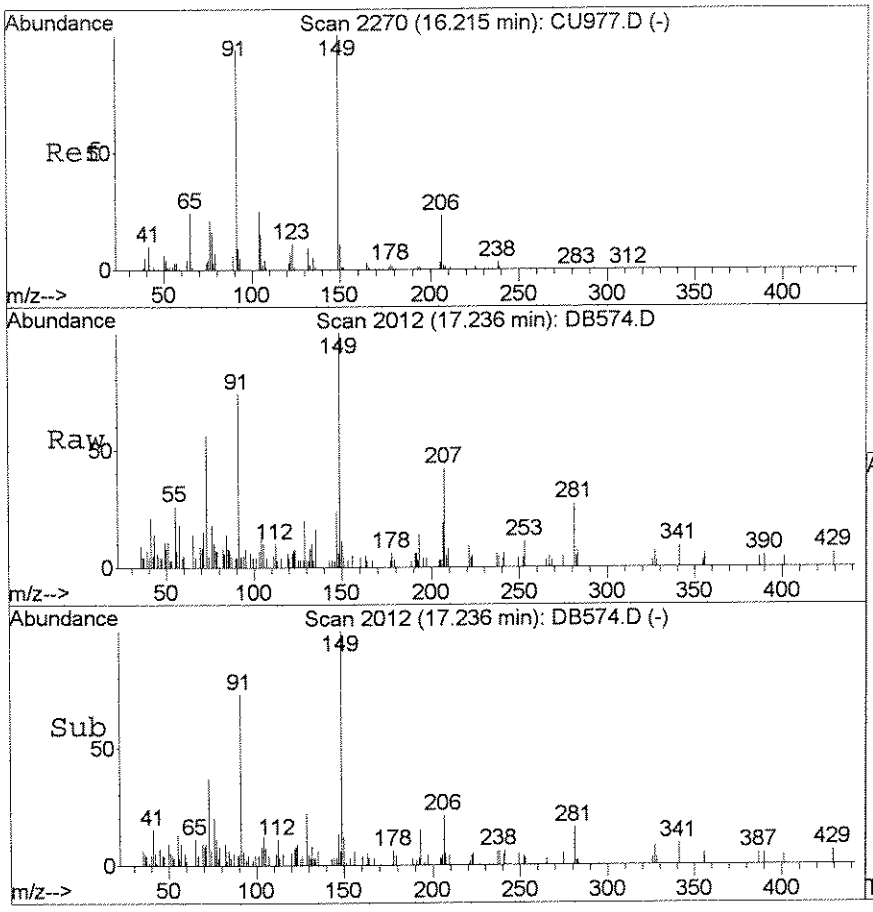
Data File : J:\ACQUDATA\5973B\DATA\091009\DB574.D
Acq On : 10 Sep 2009 5:01 pm
Sample : RQ0908042-01|1.0
Misc : 09/02/2009 1.0 Northgate 8270.LL EQBLK1
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:46 2009

Vial: 5
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

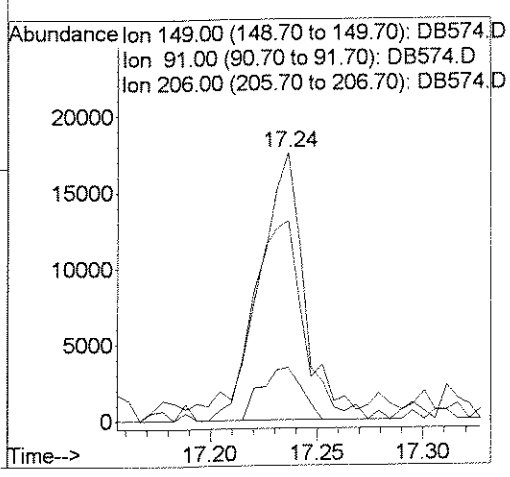




#29
Butyl benzyl phthalate
Concen: 0.20 ppm
RT: 17.24 min Scan# 2012
Delta R.T. -0.01 min
Lab File: DB574.D
Acq: 10 Sep 2009 5:01 pm

Tgt Ion:149 Resp: 25165

Ion	Ratio	Lower	Upper
149	100		
91	68.8	53.5	99.5
206	19.3	12.0	22.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908043-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	9/ 2/09	9/10/09 17:43	95122	169951	
Acenaphthene	0.053	U	0.20	0.053	1	9/ 2/09	9/10/09 17:43	95122	169951	
Acenaphthylene	0.076	U	0.20	0.076	1	9/ 2/09	9/10/09 17:43	95122	169951	
Anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benz(a)anthracene	0.041	U	0.20	0.041	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	9/ 2/09	9/10/09 17:43	95122	169951	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:43	95122	169951	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	9/ 2/09	9/10/09 17:43	95122	169951	
Butyl Benzyl Phthalate	**0.13**	J	5.0	0.11	1	9/ 2/09	9/10/09 17:43	95122	169951	
Chrysene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:43	95122	169951	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	9/ 2/09	9/10/09 17:43	95122	169951	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	9/ 2/09	9/10/09 17:43	95122	169951	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:43	95122	169951	
Diethyl Phthalate	0.20	U	5.0	0.20	1	9/ 2/09	9/10/09 17:43	95122	169951	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	9/ 2/09	9/10/09 17:43	95122	169951	
Fluoranthene	0.040	U	0.20	0.040	1	9/ 2/09	9/10/09 17:43	95122	169951	
Fluorene	0.055	U	0.20	0.055	1	9/ 2/09	9/10/09 17:43	95122	169951	
Hexachlorobenzene	0.035	U	0.20	0.035	1	9/ 2/09	9/10/09 17:43	95122	169951	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	9/ 2/09	9/10/09 17:43	95122	169951	
Naphthalene	0.14	U	0.20	0.14	1	9/ 2/09	9/10/09 17:43	95122	169951	
Nitrobenzene	0.046	U	0.20	0.046	1	9/ 2/09	9/10/09 17:43	95122	169951	
Phenanthrene	0.062	U	0.20	0.062	1	9/ 2/09	9/10/09 17:43	95122	169951	
Pyrene	0.029	U	0.20	0.029	1	9/ 2/09	9/10/09 17:43	95122	169951	
Pyridine	0.89	U	2.0	0.89	1	9/ 2/09	9/10/09 17:43	95122	169951	
1,4-Dioxane	0.13	U	2.0	0.13	1	9/ 2/09	9/10/09 17:43	95122	169951	
Octachlorostyrene	0.13	U	0.20	0.13	1	9/ 2/09	9/10/09 17:43	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Pre-Prep Date:	8/31/09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908043-01	**Basis:**	NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	84	45-135	9/10/09 17:43		
Nitrobenzene-d5	81	45-135	9/10/09 17:43		
p-Terphenyl-d14	91	45-135	9/10/09 17:43		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB575.D Vial: 6
Acq On : 10 Sep 2009 5:43 pm Operator: J.Wu
Sample : RQ0908043-01|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL EQBLK2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:54 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.83	152	39806	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	153052	1.00	ppm	-0.01
10) d10-Acenaphthene	13.71	164	78076	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	154181	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	172790	1.00	ppm	0.00
33) d12-Perylene	22.42	264	123667	1.00	ppm	-0.01
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.41	82	100132	1.62	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 81.00%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	176244	1.67	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 83.50%			
28) SURR6,TERPHENYL-D14	16.59	244	260850	1.82	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 91.00%			
Target Compounds						Qvalue
29) Butyl benzyl phthalate	17.23	149	15685m	0.14	ppm	

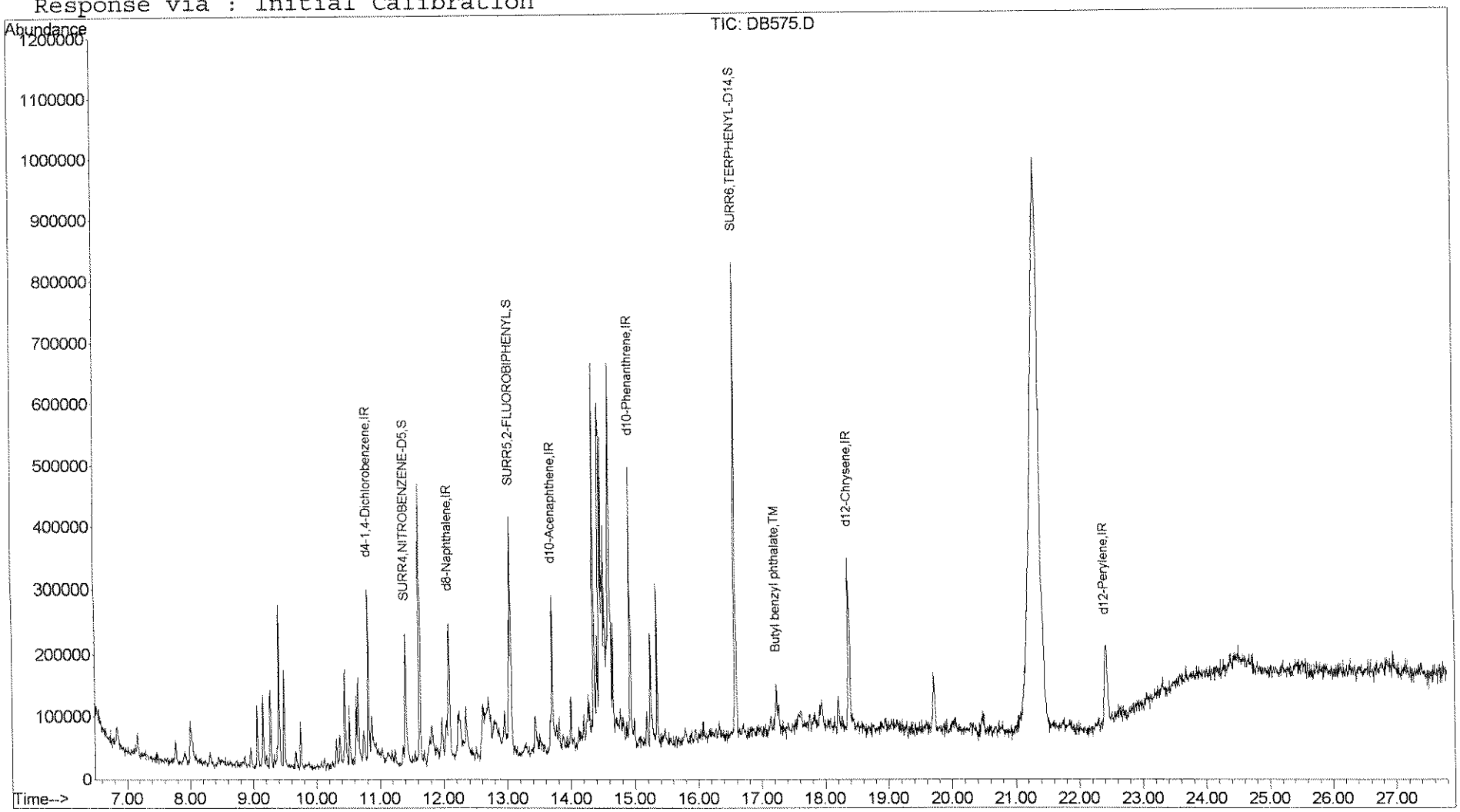
(#) = qualifier out of range (m) = manual integration
DB575.D LVI0819.M Fri Sep 11 08:54:41 2009 Page 1

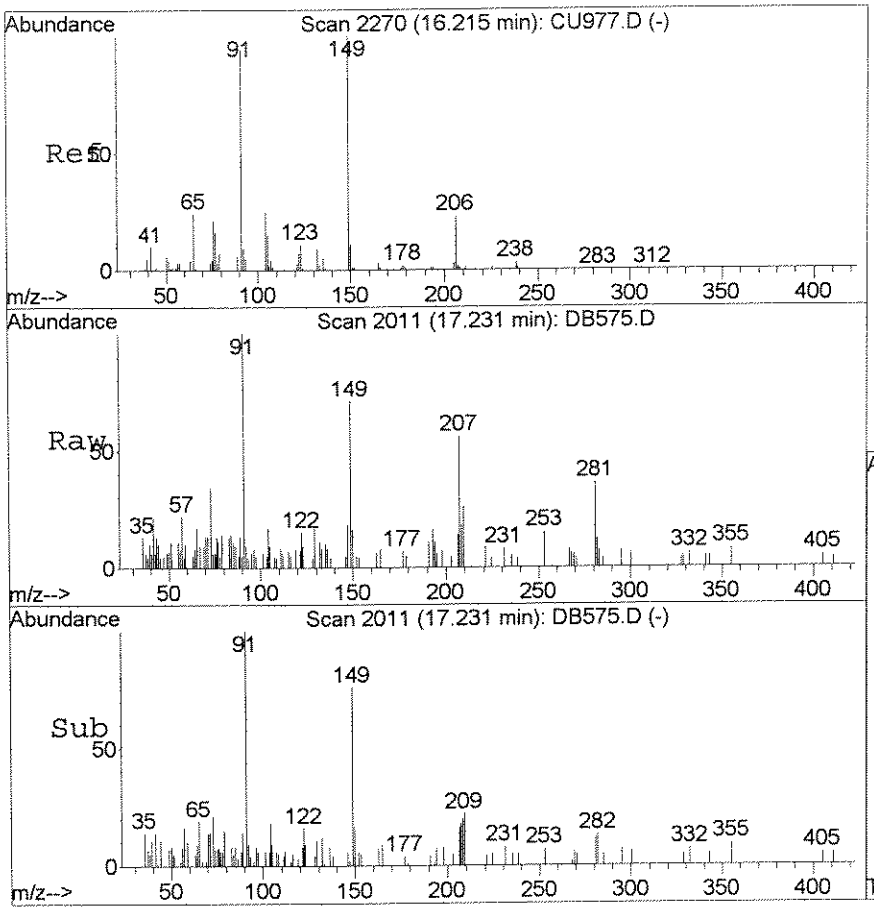
00314

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB575.D Vial: 6
Acq On : 10 Sep 2009 5:43 pm Operator: J.Wu
Sample : RQ0908043-01|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL EQBLK2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:54 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

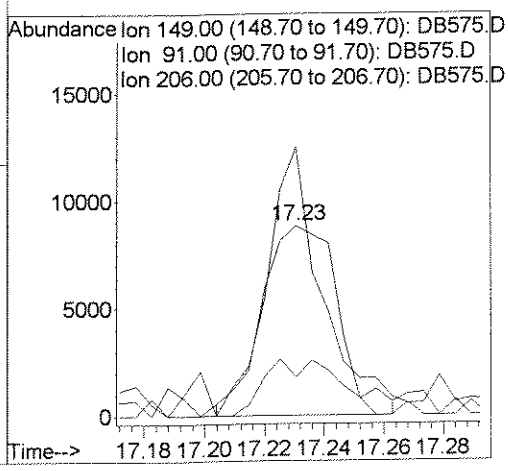




#29
Butyl benzyl phthalate
Concen: 0.14 ppm m
RT: 17.23 min Scan# 2011
Delta R.T. -0.01 min
Lab File: DB575.D
Acq: 10 Sep 2009 5:43 pm

Tgt Ion:149 Resp: 15685

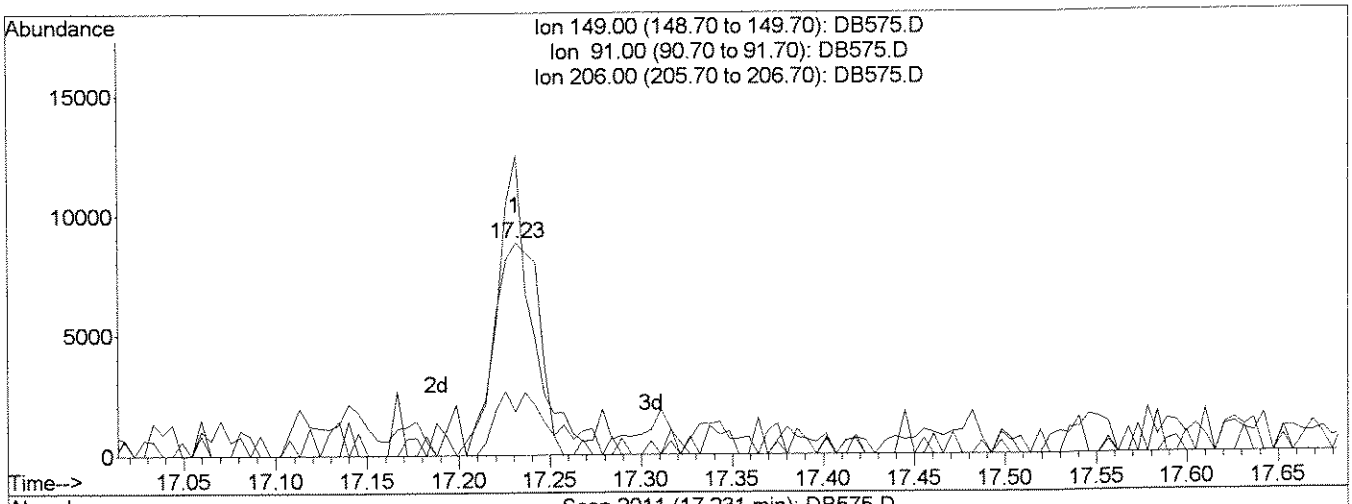
Ion	Ratio	Lower	Upper
149	100		
91	141.4	53.5	99.5#
206	20.3	12.0	22.2

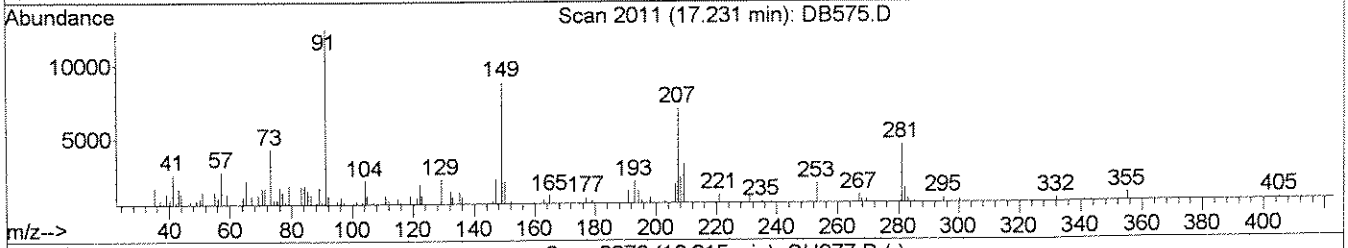


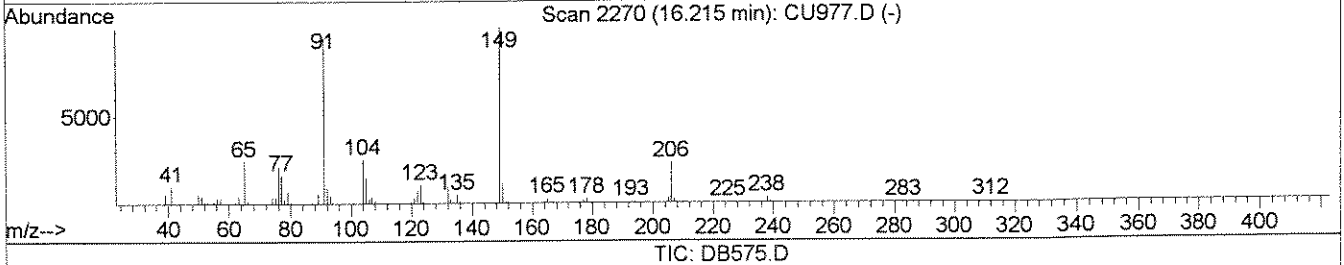
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB575.D Vial: 6
Acq On : 10 Sep 2009 5:43 pm Operator: J.Wu
Sample : RQ0908043-01|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL EQBLK2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:53 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration







TIC: DB575.D

(29) Butyl benzyl phthalate (TM)

17.23min 0.15ppm

response 16751

Ion	Exp%	Act%
149.00	100	100
91.00	76.50	125.23#
206.00	17.10	20.29
0.00	0.00	0.00

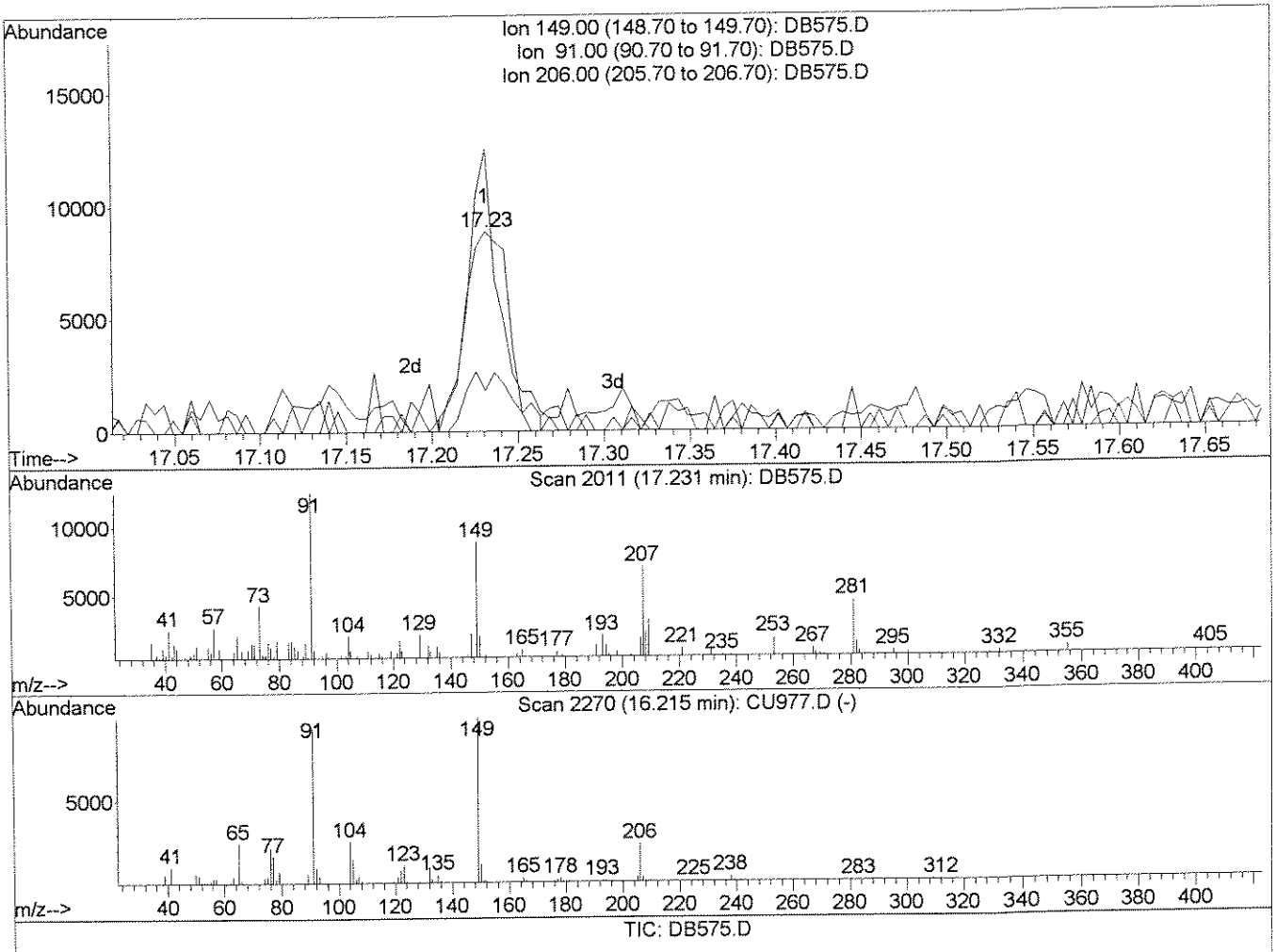
B

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB575.D
Acq On : 10 Sep 2009 5:43 pm
Sample : RQ0908043-01|1.0
Misc : 09/02/2009 1.0 Northgate 8270.LL EQBLK2
MS Integration Params: RTEINT.P
Quant Time: Sep 11 8:54 2009

Vial: 6
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration



TIC: DB575.D

(29) Butyl benzyl phthalate (TM)

17.23min 0.14ppm m

response 15685

Ion	Exp%	Act%
149.00	100	100
91.00	76.50	141.39#
206.00	17.10	20.29
0.00	0.00	0.00

AJW 9/11/09

DB575.D LVI0819.M Fri Sep 11 08:54:22 2009

00318

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Sample Name: Lab Control Sample
Lab Code: RQ0908092-02

Service Request: R0904817
Date Collected: NA
Date Received: NA

Units: µg/L
Basis: NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	**3.65**		0.20	0.048	1	9/ 2/09	9/9/09 21:50	95122	169753	
Acenaphthene	**3.35**		0.20	0.053	1	9/ 2/09	9/9/09 21:50	95122	169753	
Acenaphthylene	**3.43**		0.20	0.076	1	9/ 2/09	9/9/09 21:50	95122	169753	
Anthracene	**3.63**		0.20	0.041	1	9/ 2/09	9/9/09 21:50	95122	169753	
Benz(a)anthracene	**3.92**		0.20	0.041	1	9/ 2/09	9/9/09 21:50	95122	169753	
Benzo(a)pyrene	**3.29**		0.20	0.042	1	9/ 2/09	9/9/09 21:50	95122	169753	
Benzo(b)fluoranthene	**3.70**		0.20	0.027	1	9/ 2/09	9/9/09 21:50	95122	169753	
Benzo(g,h,i)perylene	**3.30**		0.20	0.030	1	9/ 2/09	9/9/09 21:50	95122	169753	
Benzo(k)fluoranthene	**3.73**		0.20	0.029	1	9/ 2/09	9/9/09 21:50	95122	169753	
Bis(2-ethylhexyl) Phthalate	**4.10**	J	5.0	0.23	1	9/ 2/09	9/9/09 21:50	95122	169753	
Butyl Benzyl Phthalate	**3.61**	J	5.0	0.11	1	9/ 2/09	9/9/09 21:50	95122	169753	
Chrysene	**3.73**		0.20	0.029	1	9/ 2/09	9/9/09 21:50	95122	169753	
Di-n-butyl Phthalate	**3.94**	J	5.0	0.76	1	9/ 2/09	9/9/09 21:50	95122	169753	
Di-n-octyl Phthalate	**3.39**	J	5.0	0.041	1	9/ 2/09	9/9/09 21:50	95122	169753	
Dibenz(a,h)anthracene	**3.57**		0.20	0.046	1	9/ 2/09	9/9/09 21:50	95122	169753	
Diethyl Phthalate	**3.44**	J	5.0	0.20	1	9/ 2/09	9/9/09 21:50	95122	169753	
Dimethyl Phthalate	**3.19**	J	5.0	0.044	1	9/ 2/09	9/9/09 21:50	95122	169753	
Fluoranthene	**3.90**		0.20	0.040	1	9/ 2/09	9/9/09 21:50	95122	169753	
Fluorene	**3.58**		0.20	0.055	1	9/ 2/09	9/9/09 21:50	95122	169753	
Hexachlorobenzene	**3.93**		0.20	0.035	1	9/ 2/09	9/9/09 21:50	95122	169753	
Indeno(1,2,3-cd)pyrene	**3.48**		0.20	0.049	1	9/ 2/09	9/9/09 21:50	95122	169753	
Naphthalene	**3.30**		0.20	0.14	1	9/ 2/09	9/9/09 21:50	95122	169753	
Nitrobenzene	**3.57**		0.20	0.046	1	9/ 2/09	9/9/09 21:50	95122	169753	
Phenanthrene	**3.58**		0.20	0.062	1	9/ 2/09	9/9/09 21:50	95122	169753	
Pyrene	**3.67**		0.20	0.029	1	9/ 2/09	9/9/09 21:50	95122	169753	
Pyridine	**0.750**		2.0	0.89	1	9/ 2/09	9/9/09 21:50	95122	169753	
1,4-Dioxane	**2.45**		2.0	0.13	1	9/ 2/09	9/9/09 21:50	95122	169753	
Octachlorostyrene	**3.01**		0.20	0.13	1	9/ 2/09	9/9/09 21:50	95122	169753	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0908092-02	**Basis:**	NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	85	45-135	9/9/09 21:50		
Nitrobenzene-d5	94	45-135	9/9/09 21:50		
p-Terphenyl-d14	99	45-135	9/9/09 21:50		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB556.D Vial: 17
Acq On : 9 Sep 2009 9:50 pm Operator: J.Wu
Sample : RQ0908092-02|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP LC Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:25 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	38510	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	170303	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	102287	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	160361	1.00	ppm	0.00
26) d12-Chrysene	18.39	240	170932	1.00	ppm	0.00
33) d12-Perylene	22.43	264	134523	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.40	82	129386	1.88	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 94.00%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	235880	1.70	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 85.00%			
28) SURR6,TERPHENYL-D14	16.59	244	281405	1.98	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 99.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.57	88	96310	2.45	ppm	97
3) Pyridine	7.32	79	44644	0.75	ppm	84
6) Nitrobenzene	11.42	77	243777	3.57	ppm	95
7) Naphthalene	12.11	128	638772	3.30	ppm	99
8) 2-Methylnaphthalene	12.74	142	423069	3.65	ppm	94
9) 1-Methylnaphthalene	12.84	142	411617	3.73	ppm	94
12) Acenaphthylene	13.58	152	672792	3.43	ppm	99
13) Dimethyl phthalate	13.42	163	514639	3.19	ppm	97
14) Acenaphthene	13.74	153	419027	3.35	ppm	96
15) Dibenzofuran	13.88	168	571481	3.38	ppm	84
16) Fluorene	14.16	166	471224	3.58	ppm	94
17) Diethylphthalate	14.01	149	561604	3.44	ppm	98
19) Hexachlorobenzene	14.66	284	152912	3.93	ppm	93
20) Phenanthrene	14.96	178	664247	3.58	ppm	99
21) Anthracene	15.00	178	656472	3.63	ppm	96
22) Carbazole	15.12	167	359235	2.78	ppm	99
23) Octachlorostyrene	15.99	378	32060m	3.01	ppm	
24) Di-n-butylphthalate	15.36	149	924122	3.94	ppm	98
25) Fluoranthene	16.21	202	744825	3.90	ppm	97
27) Pyrene	16.50	202	756053	3.67	ppm	97
29) Butyl benzyl phthalate	17.24	149	397181	3.61	ppm	96
30) bis(2-Ethylhexyl)phthalate	18.21	149	573170	4.10	ppm	99
31) Benzo(a)anthracene	18.35	228	735043	3.92	ppm	97
32) Chrysene	18.44	228	687135	3.73	ppm	99
34) Di-n-octyl phthalate	19.65	149	861388	3.39	ppm	96
35) Benzo(b)Fluoranthene	21.14	252	756580	3.70	ppm	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB556.D Vial: 17
Acq On : 9 Sep 2009 9:50 pm Operator: J.Wu
Sample : RQ0908092-02|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP LCS Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:25 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

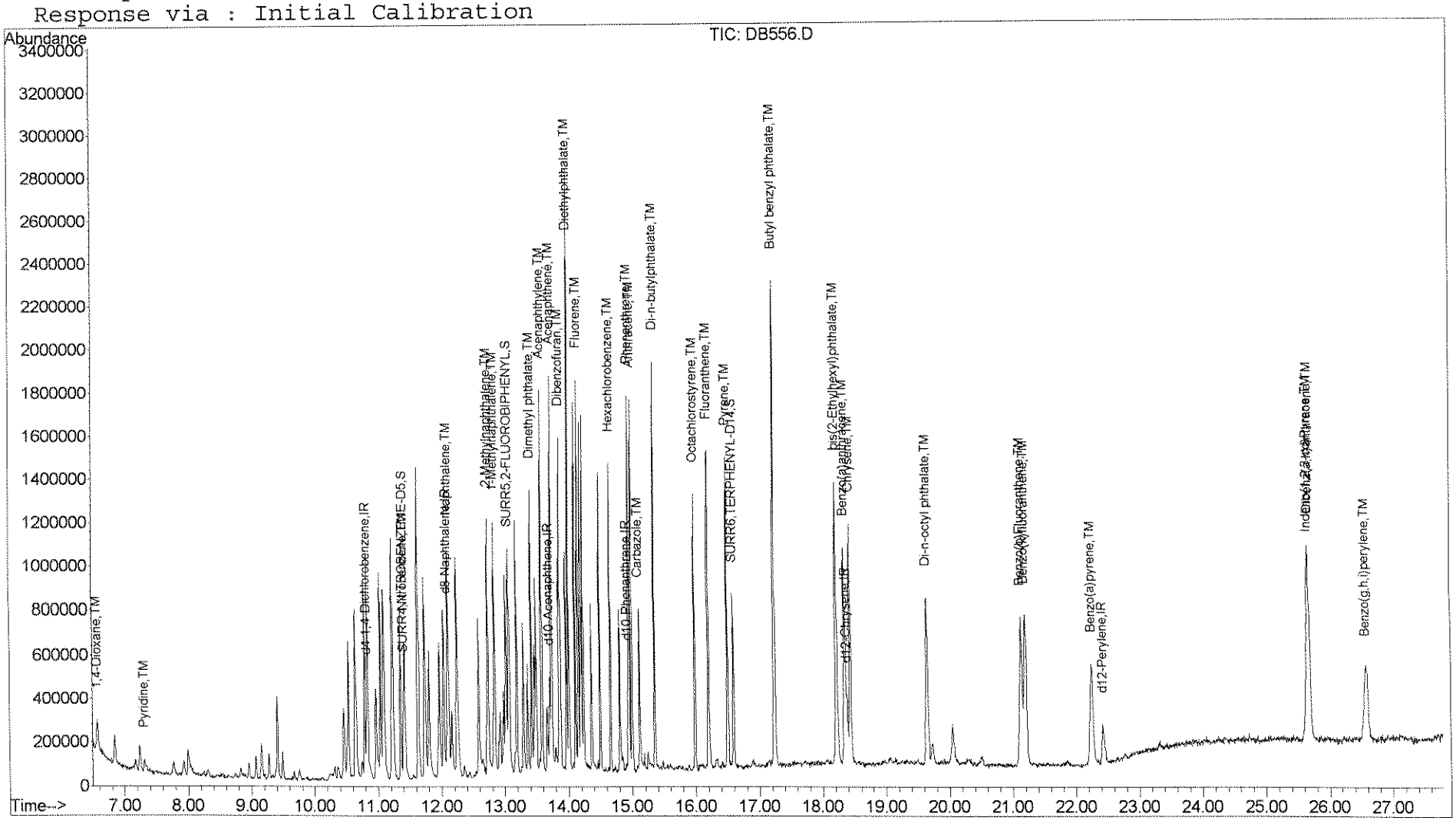
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) Benzo(k)fluoranthene	21.20	252	735594	3.73	ppm	91
37) Benzo(a)pyrene	22.25	252	596867	3.29	ppm	94
38) Indeno(1,2,3-cd)Pyrene	25.66	276	745259	3.48	ppm	85
39) Dibenz(a,h)anthracene	25.67	278	652951	3.57	ppm	92
40) Benzo(g,h,i)perylene	26.57	276	558182	3.30	ppm	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\090909\DB556.D Vial: 17
Acq On : 9 Sep 2009 9:50 pm Operator: J.Wu
Sample : RQ0908092-02|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP LCS Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:25 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration

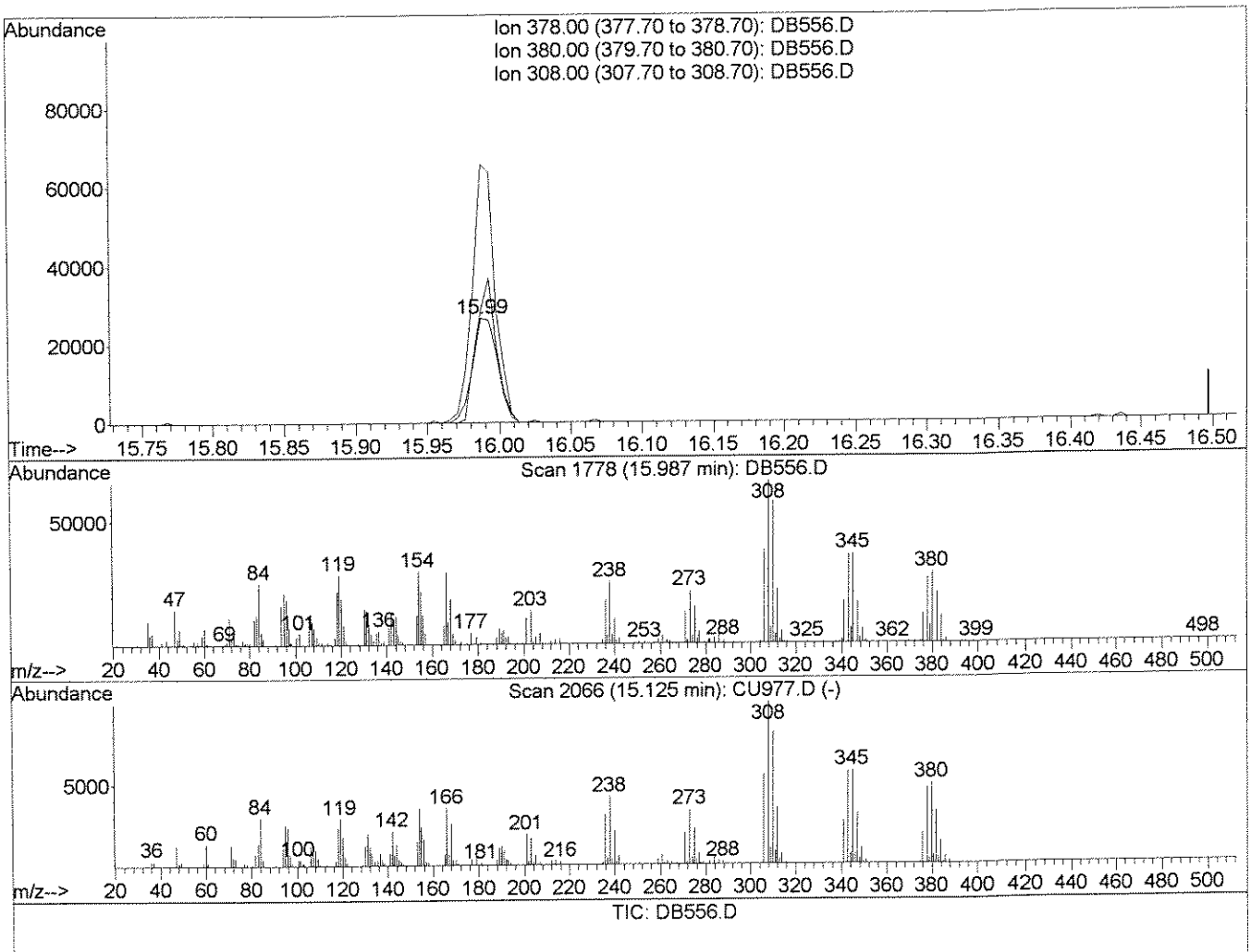


Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB556.D
Acq On : 9 Sep 2009 9:50 pm
Sample : RQ0908092-02|1.0
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP LCS
MS Integration Params: RTEINT.P
Quant Time: Sep 9 22:18 2009

Vial: 17
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration



TIC: DB556.D

(23) Octachlorostyrene (TM)

15.99min 3.01ppm

response 32054

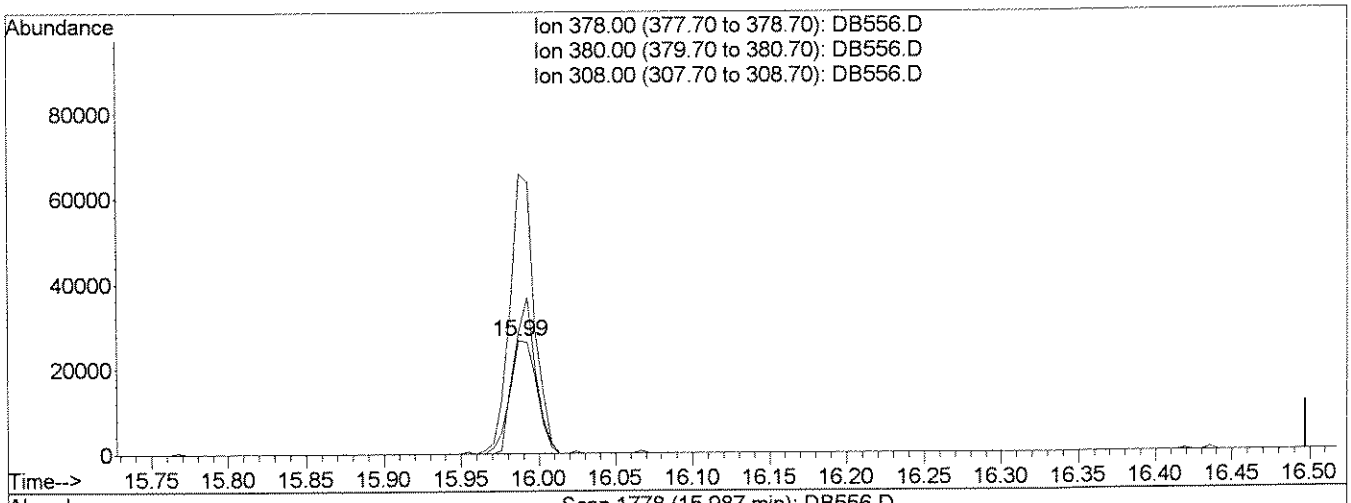
Ion	Exp%	Act%
378.00	100	100
380.00	98.40	107.72
308.00	165.40	247.84#
0.00	0.00	0.00

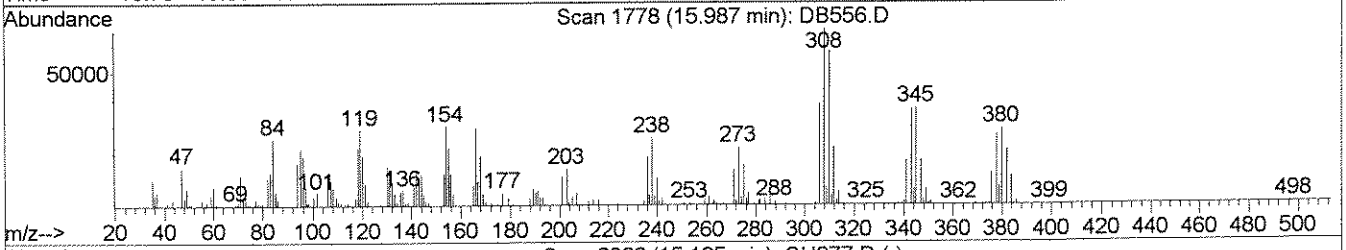
DB556.D LVI0819.M Thu Sep 10 10:25:36 2009

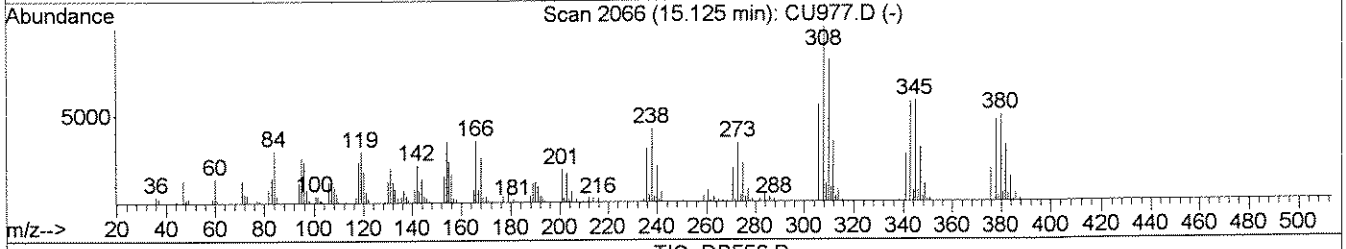
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\090909\DB556.D Vial: 17
Acq On : 9 Sep 2009 9:50 pm Operator: J.Wu
Sample : RQ0908092-02|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL/SPLP LCS Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 10:25 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Multiple Level Calibration







TIC: DB556.D

(23) Octachlorostyrene (TM)

15.99min 3.01ppm m

response 32060

Ion	Exp%	Act%
378.00	100	100
380.00	98.40	107.72
308.00	165.40	247.84#
0.00	0.00	0.00

9/10/09

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Sample Name: Lab Control Sample Dup
Lab Code: RQ0908092-03

Service Request: R0904817
Date Collected: NA
Date Received: NA

Units: µg/L
Basis: NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	**3.80**		0.20	0.048	1	9/ 2/09	9/10/09 13:38	95122	169951	
Acenaphthene	**3.78**		0.20	0.053	1	9/ 2/09	9/10/09 13:38	95122	169951	
Acenaphthylene	**3.80**		0.20	0.076	1	9/ 2/09	9/10/09 13:38	95122	169951	
Anthracene	**3.70**		0.20	0.041	1	9/ 2/09	9/10/09 13:38	95122	169951	
Benz(a)anthracene	**3.75**		0.20	0.041	1	9/ 2/09	9/10/09 13:38	95122	169951	
Benzo(a)pyrene	**3.30**		0.20	0.042	1	9/ 2/09	9/10/09 13:38	95122	169951	
Benzo(b)fluoranthene	**3.98**		0.20	0.027	1	9/ 2/09	9/10/09 13:38	95122	169951	
Benzo(g,h,i)perylene	**4.22**		0.20	0.030	1	9/ 2/09	9/10/09 13:38	95122	169951	
Benzo(k)fluoranthene	**3.68**		0.20	0.029	1	9/ 2/09	9/10/09 13:38	95122	169951	
Bis(2-ethylhexyl) Phthalate	**3.81**	J	5.0	0.23	1	9/ 2/09	9/10/09 13:38	95122	169951	
Butyl Benzyl Phthalate	**3.26**	J	5.0	0.11	1	9/ 2/09	9/10/09 13:38	95122	169951	
Chrysene	**3.63**		0.20	0.029	1	9/ 2/09	9/10/09 13:38	95122	169951	
Di-n-butyl Phthalate	**3.83**	J	5.0	0.76	1	9/ 2/09	9/10/09 13:38	95122	169951	
Di-n-octyl Phthalate	**3.31**	J	5.0	0.041	1	9/ 2/09	9/10/09 13:38	95122	169951	
Dibenz(a,h)anthracene	**3.94**		0.20	0.046	1	9/ 2/09	9/10/09 13:38	95122	169951	
Diethyl Phthalate	**4.02**	J	5.0	0.20	1	9/ 2/09	9/10/09 13:38	95122	169951	
Dimethyl Phthalate	**3.72**	J	5.0	0.044	1	9/ 2/09	9/10/09 13:38	95122	169951	
Fluoranthene	**4.07**		0.20	0.040	1	9/ 2/09	9/10/09 13:38	95122	169951	
Fluorene	**4.26**		0.20	0.055	1	9/ 2/09	9/10/09 13:38	95122	169951	
Hexachlorobenzene	**3.81**		0.20	0.035	1	9/ 2/09	9/10/09 13:38	95122	169951	
Indeno(1,2,3-cd)pyrene	**3.97**		0.20	0.049	1	9/ 2/09	9/10/09 13:38	95122	169951	
Naphthalene	**3.44**		0.20	0.14	1	9/ 2/09	9/10/09 13:38	95122	169951	
Nitrobenzene	**3.89**		0.20	0.046	1	9/ 2/09	9/10/09 13:38	95122	169951	
Phenanthrene	**3.70**		0.20	0.062	1	9/ 2/09	9/10/09 13:38	95122	169951	
Pyrene	**3.54**		0.20	0.029	1	9/ 2/09	9/10/09 13:38	95122	169951	
Pyridine	**0.420**		2.0	0.89	1	9/ 2/09	9/10/09 13:38	95122	169951	
1,4-Dioxane	**2.28**		2.0	0.13	1	9/ 2/09	9/10/09 13:38	95122	169951	
Octachlorostyrene	**3.11**		0.20	0.13	1	9/ 2/09	9/10/09 13:38	95122	169951	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample Dup	**Units:**	µg/L
Lab Code:	RQ0908092-03	**Basis:**	NA

SPLP Low Level Semivolatile Organic Compounds by GC/MS.

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	88	45-135	9/10/09 13:38		
Nitrobenzene-d5	98	45-135	9/10/09 13:38		
p-Terphenyl-d14	95	45-135	9/10/09 13:38		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB571.D Vial: 2
Acq On : 10 Sep 2009 1:38 pm Operator: J.Wu
Sample : RQ0908092-03|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL LCSD Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 14:06 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.82	152	38619	1.00	ppm	0.00
4) d8-Naphthalene	12.09	136	143006	1.00	ppm	0.00
10) d10-Acenaphthene	13.71	164	87637	1.00	ppm	0.00
18) d10-Phenanthrene	14.93	188	165291	1.00	ppm	0.00
26) d12-Chrysene	18.38	240	187957	1.00	ppm	0.00
33) d12-Perylene	22.41	264	140467	1.00	ppm	-0.02
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.40	82	112909	1.95	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 97.50%			
11) SURR5,2-FLUOROBIPHENYL	13.06	172	209576	1.76	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 88.00%			
28) SURR6,TERPHENYL-D14	16.59	244	295084	1.89	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 94.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.58	88	90059	2.28	ppm	99
3) Pyridine	7.33	79	24988	0.42	ppm	85
6) Nitrobenzene	11.42	77	222923	3.89	ppm	92
7) Naphthalene	12.11	128	559010	3.44	ppm	96
8) 2-Methylnaphthalene	12.74	142	369689	3.80	ppm	96
9) 1-Methylnaphthalene	12.84	142	361296	3.90	ppm	94
12) Acenaphthylene	13.58	152	637568	3.80	ppm	98
13) Dimethyl phthalate	13.42	163	514048	3.72	ppm	99
14) Acenaphthene	13.74	153	405165	3.78	ppm	97
15) Dibenzofuran	13.88	168	598792	4.14	ppm	93
16) Fluorene	14.15	166	480138	4.26	ppm	97
17) Diethylphthalate	14.01	149	562015	4.02	ppm	100
19) Hexachlorobenzene	14.66	284	152957	3.81	ppm	94
20) Phenanthrene	14.96	178	705972	3.70	ppm	98
21) Anthracene	15.00	178	690725	3.70	ppm	98
22) Carbazole	15.12	167	445614	3.35	ppm	98
23) Octachlorostyrene	15.99	378	34302	3.11	ppm	68
24) Di-n-butylphthalate	15.36	149	926729	3.83	ppm	98
25) Fluoranthene	16.20	202	801002	4.07	ppm	97
27) Pyrene	16.49	202	801963	3.54	ppm	96
29) Butyl benzyl phthalate	17.23	149	394449	3.26	ppm	89
30) bis(2-Ethylhexyl)phthalate	18.21	149	585164	3.81	ppm	97
31) Benzo(a)anthracene	18.34	228	772379	3.75	ppm	96
32) Chrysene	18.43	228	735694	3.63	ppm	98
34) Di-n-octyl phthalate	19.64	149	880230	3.31	ppm	98
35) Benzo(b)Fluoranthene	21.13	252	849332	3.98	ppm	97

(#) = qualifier out of range (m) = manual integration

00328

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\091009\DB571.D Vial: 2
Acq On : 10 Sep 2009 1:38 pm Operator: J.Wu
Sample : RQ0908092-03|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL LCSD Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 14:06 2009 Quant Results File: LVI0819.RES

Quant Method : J:\ACQUDATA\5...\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration
DataAcq Meth : LVI0819

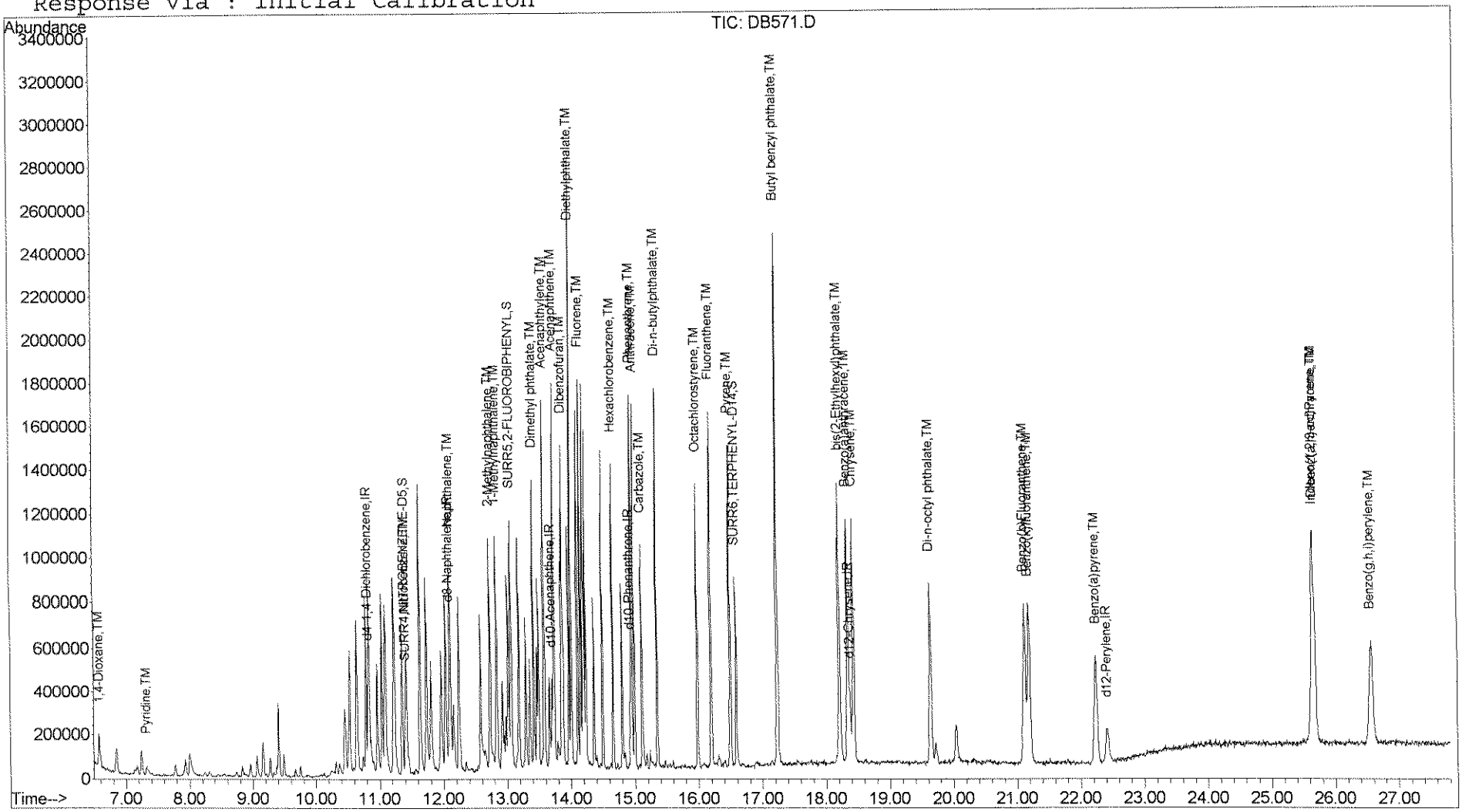
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	21.20	252	757507	3.68	ppm	97
37)	Benzo(a)pyrene	22.24	252	624388	3.30	ppm	93
38)	Indeno(1,2,3-cd)Pyrene	25.65	276	889352	3.97	ppm	93
39)	Dibenz(a,h)anthracene	25.67	278	752461	3.94	ppm	95
40)	Benzo(g,h,i)perylene	26.57	276	744904	4.22	ppm	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\091009\DB571.D Vial: 2
Acq On : 10 Sep 2009 1:38 pm Operator: J.Wu
Sample : RQ0908092-03|1.0 Inst : 5973-B
Misc : 09/02/2009 1.0 Northgate 8270.LL LCSD Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 10 14:06 2009 Quant Results File: LVI0819.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI0819.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Aug 20 10:05:30 2009
Response via : Initial Calibration



Preparation Information Benchsheet

Prep Run#: 95122
Team: Semivoa GCMS/DMURPHY

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 9/2/09 07:37 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908092-01	MB		1000.0mL	8270C/SVO LL SPLP	6	x	x	1.00mL	clear-colorless	1.0000 mL/11960	
2	RQ0908092-02	LCS		1000.0mL	8270C/SVO LL SPLP	6	x	x	1.00mL	clear-colorless	1.0000 mL/11669; 1.0000 mL/11841; 1.0000 mL/11960	
3	RQ0908092-03	DLCS		1000.0mL	8270C/SVO LL SPLP	6	x	x	1.00mL	clear-colorless	1.0000 mL/11669; 1.0000 mL/11841; 1.0000 mL/11960	
4	R0904817-001	SA64-10BSPLP2	.07	1060.0mL	8270C/SVO LL SPLP	7	x	x	1.00mL	yellow-cloudy	1.0000 mL/11960	STR, STR.
5	R0904817-002	SA64-10BSPLP3	.11	1060.0mL	8270C/SVO LL SPLP	7	x	x	1.00mL	yellow-cloudy	1.0000 mL/11960	STR, STR.
6	RQ0908042-01	MB	.04	1060.0mL	8270C/SVO LL SPLP	5	x	x	1.00mL	clear-colorless	1.0000 mL/11960	
7	RQ0908043-01	MB	.03	1060.0mL	8270C/SVO LL SPLP	5	x	x	1.00mL	clear-colorless	1.0000 mL/11960	

Spiking Solutions

Name:	8270 LVI LCS Spike 4ppm	Inventory ID	11669	Logbook Ref:	0-618--145-B	Expires On:	10/06/2009
Name:	8270 LVI 1,4-Dioxane LCS Spike 5ppm	Inventory ID	11841	Logbook Ref:		Expires On:	09/27/2009
Name:	8270 LVI Surrogate 2/4 ug/mL	Inventory ID	11960	Logbook Ref:		Expires On:	03/01/2010

Preparation Materials

Sulfuric Acid, 50% H2SO4 (11821)

Dichloromethane (Methylene Chloride) 99.9% MeCl2 0-344-43-P (11678)

Sodium Hydroxide 50% NaOH 0-344-42-V (10543)

Prepared Sodium Sulfate Na2SO4 (11959)

Preparation Steps

Step:	Extraction	Step:	Concentration	Step:	Final Volume
Started:	9/2/09 07:37	Started:	9/3/09 10:00	Started:	9/3/09 13:14
Finished:	9/2/09 23:00	Finished:	9/3/09 13:14	Finished:	9/3/09 13:14
By:	DMURPHY	By:	LDESSENA	By:	LDESSENA

Comments:

Reviewed By: Meghan Kelly Date: 9/3/09 Spike Witness: DCURRAN Date: 9/3/09

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined
Yes No

10 ul of 100 ppm ISTD (0-618-139A) to 1.0 ml   5973B

8/19/09		Tune check	10 ng DFTPP	DFTPPLV1.M 0-618-137K	DB256	YT 10:26Am.
	1	10/20			257	—
	1	10/20			258	—
	2	Blk			259	Ym
0-618-139D	3	Initial Calibration	0.1/0.2 PPM	LV10819.M	DB260	YS
E	4		0.2/0.4		261	YS
F	5		0.5/1.0		262	YS
G	6		1.0/2.0		263	YS
H	7		2.0/4.0		264	YS
I	8		3.0/6.0		265	YS
J	9		4.0/8.0		266	YS
K	10		5.0/10.0		267	YS
L	11		10.0/20.0		268	YS
0-618-126G	12	ICV 1	2.0 PPM		269	No Syringe error
0-618-126H	13	ICV 2	2.0		270	↓
0-618-140D	14	ICV 3	2.0		DB271	↓

JW/ZW

DB264
43134
168446
91953
157649
165214
117855

5973-B

Run# 169753

10 µL of 100PPM ISTD Co 618-149(11) to 1.0 mL.

9/9/09		Tune check	10 ng DFTPP	DFTPP LV1.m	DB539	YT 9:51
	1	calibration check	2.0/4.0 PPM	LV10819.m	DB540	YC
R0904782	2	[redacted]	R0904782-011/1.0	8270.44PAH 8/21/09 soil	DB541	Y
	3		4782-004/1/10		542	Y
	4		4782-012/1.0		543	Y
	5		4782-013/1.0		544	Y
	6		4782-014/1.0		DB545	Y
R0904806	7	[redacted]	R0904806-001/1.0	8270.44PAH 8/27/09 soil	DB546	Y
	8		4806-002/1.0		DB547	Y
R0904843	9	[redacted]	R0904843-019/1/15	8270.LL 9/2/09 soil	DB548	Y
	10		4843-007/100	(Dr)	DB549	Y
R0904782	11	[redacted]	RQ0908098-01/1.0 BLK	8270.44PAH 9/2/09 soil	DB550	Ym
	12		8098-02/1.0 LCS	only	551	YQ
	13		8098-03/1.0 LCSD		552	YQ
	14		R0904782-008/1.0		553	Y
	15		GPC BLK (9/4/09)		DB554	Ym
R0904817	16	[redacted]	RQ0908092-01/1.0 BLK	8270.44PAH 9/2/09 water	DB555	Ym
	17		8092-02/1.0 LCS	(R0904894 > 8270.LL R0904948)	DB556	YQ #2,3,4 9:50
	18		8092-03/1.0 LCSD		DB557	not run
	19	cmelv			DB563	—

DB540

10.82	46549
12.09	188919
13.71	107400
14.94	187946
18.38	205373
22.43	153205

5973-B

Run# 169951 10 µl of 100 ppm ISTD (a-618-150c) to 1.0 mL.

9/10/09 Tune check 10 ng DFTPP DFTPPLV1.M

Calibration Check 2.0/4.0 ppm LV1 0819.M

Tune check 10 ng DFTPP DFTPPLV1.M

1 Calibration Check 2.0/4.0 ppm LV1 0819.M

R0904817 2 [redacted] RQ090809 2-03|1.0 LCSD 8270.sim 9/3/09 water (R0904894 ↑ 8270.LL, R0904948 ↑ 8270.LL)

3 R0904817-001|1.0

4 4817-002|1.0

5 RQ090804 2-01|1.0 ZQBLK1 9/1/09

6 RQ090804 3-01|1.0 ZQBLK2 9/2/09

R0904894 7 [redacted] R0904894-001|1.0 8270.LL 9/2/09 water

8 4894-015|1.0

R0904948 9 [redacted] R0904948-006|1.0 8270.LL 9/2/09 water

R0904843 10 [redacted] RQ090817 5-01|1.0 BLK 8270.LL 9/3/09 soil

11 8175-021|1.0 LCS (R0904894 8270.LL)

12 8175-031|1.0 LCSD

13 R0904843-023|1.0

14 RQ090817 5-04|1.0 023 MS

15 8175-051|1.0 023 MSD

R0904817 16 [redacted] R0904817-002|1.0 (Re) 8270.sim 9/1/9 water

17 4817-001|1.0 (Re)

18 Cont 2

DB570

10.82	41410
12.09	166566
13.71	85700
14.93	178591
18.38	192301
22.43	150666

DB566	YT
DB567	Fail
DB568	YT 12:21
DB570	YC
DB571	YQ #2, 3↓
572	Y IS↓, Rpt std.
573	Y IS↓, surr#5↑, Rpt
574	YM
DB575	YM
DB576	Y
577	Y
DB578	Y
DB579	YM
580	YQ #24↑
581	YQ #30↑
582	Y
583	YQ
DB584	YQ #34, #30↑ 11:4
DB585	Y IS↓ surr#5↑
DB586	Y IS↓
DB592	—

DIESEL RANGE ORGANICS

QC SUMMARY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/14/09

Lab Control Sample Summary
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 95174

Analyte Name	Lab Control Sample RQ0908132-02 Result	Expected	% Rec	Duplicate Lab Control Sample RQ0908132-03 Result	Expected	% Rec	% Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	**314**	501	63	**397**	501	79	10 - 154	23	30

Comments:

Method Blank Summary

Lab Name: **Columbia Analytical Services** *Contract:* NORTHGATE

Lab Code: **10145** *Case.No.:* R0904817 *SAS No.:* _____ *SDG No.:* SA64-10BSPLP

Lab Sample ID RQ0908132-01 *Lab File ID:* AI512.D

Matrix: SOIL *Level: (low/med)*

Date extracted: 09/02/09 *Extraction: (Sepf/Cont/Sonc)* Sonc

Date analyzed: *(1)* 9/14/2009 *Date analyzed:* *(2)*

Time analyzed: *(1)* 10:13 *Time analyzed:* *(2)*

Instrument ID: *(1)* *Instrument ID:* *(2)*

GC Column(1) *(1)* *GC Column(2)* *(2)*

This Method Blank Applies to the Following Sample, MS, and MSD:

EPA Sample No.	*Lab Sample No.*	*Date Analyzed 1*	*Date Analyzed 2*
PBLK1MS	RQ0908132-02	9/14/2009	
PBLK1MSD	RQ0908132-03	9/14/2009	
SA64-10BSPLP2	R0904817-001	9/14/2009	
SA64-10BSPLP3	R0904817-002	9/14/2009	
EQB1	RQ0908042-01	9/14/2009	
EQB2	RQ0908043-01	9/14/2009	

DIESEL RANGE ORGANICS

SAMPLE DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	94	75	1	9/ 2/09	9/14/09 14:29	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 14:29	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	85	51-117	9/14/09 14:29		

Comments:

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI517.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 2:29 pm
Operator : b.allgeier
Sample : ~~R0904917-001~~ R0904817-001
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:31:31 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.145	86618032	84.75	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 84.75%		
Target Compounds				
2) HC Diesel Range Organics	15.265	70529468	74.71	mg/l M
3) HC Oil Range Organics	0.000	0	N.D.	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA
9/15

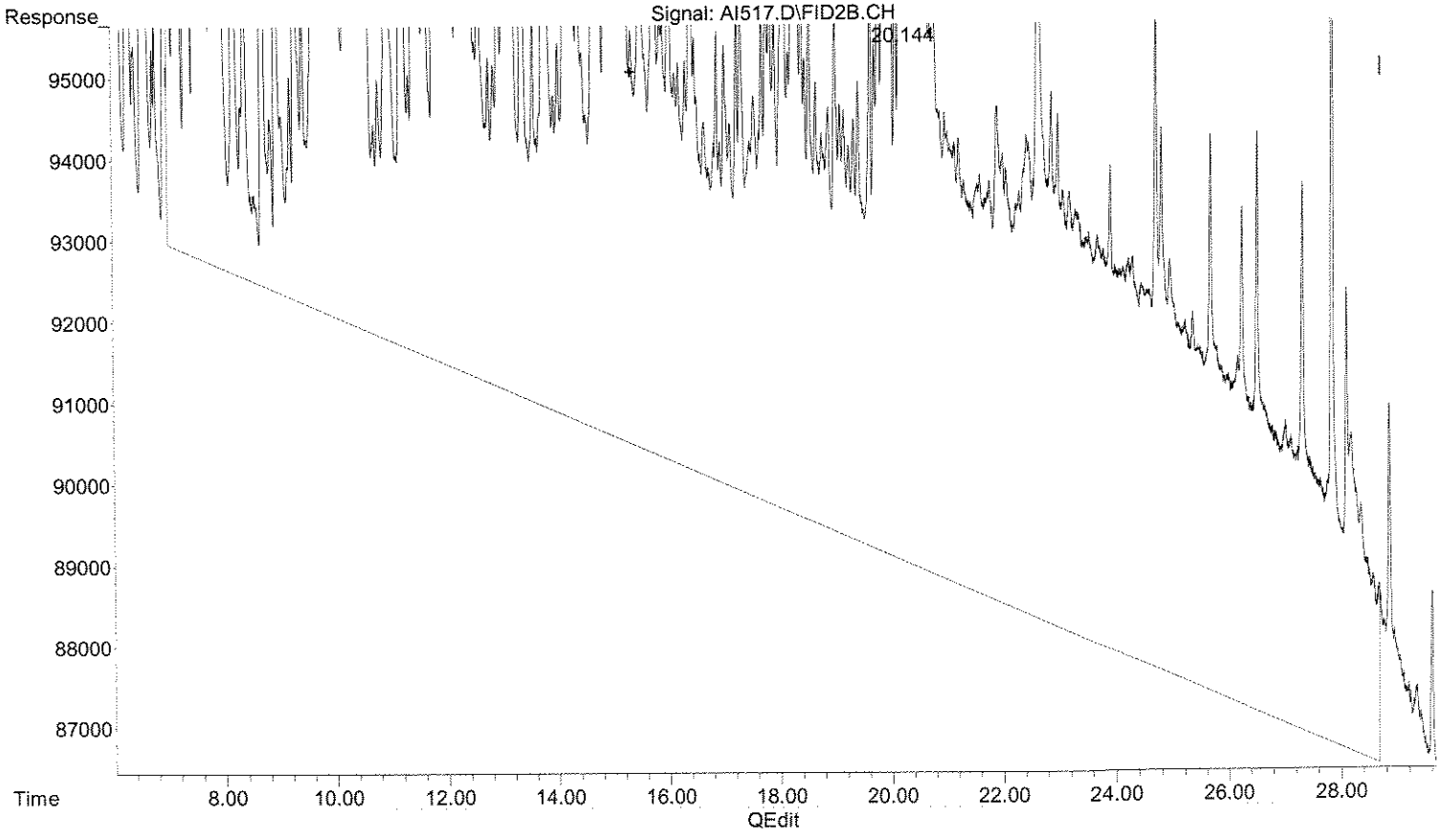
00340

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI517.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 2:29 pm
Operator : b.allgeier
Sample : R0904917-001
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:30 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 87.654mg/l m

response 82753852

B
(BAD INT)

(+) = Expected Retention Time

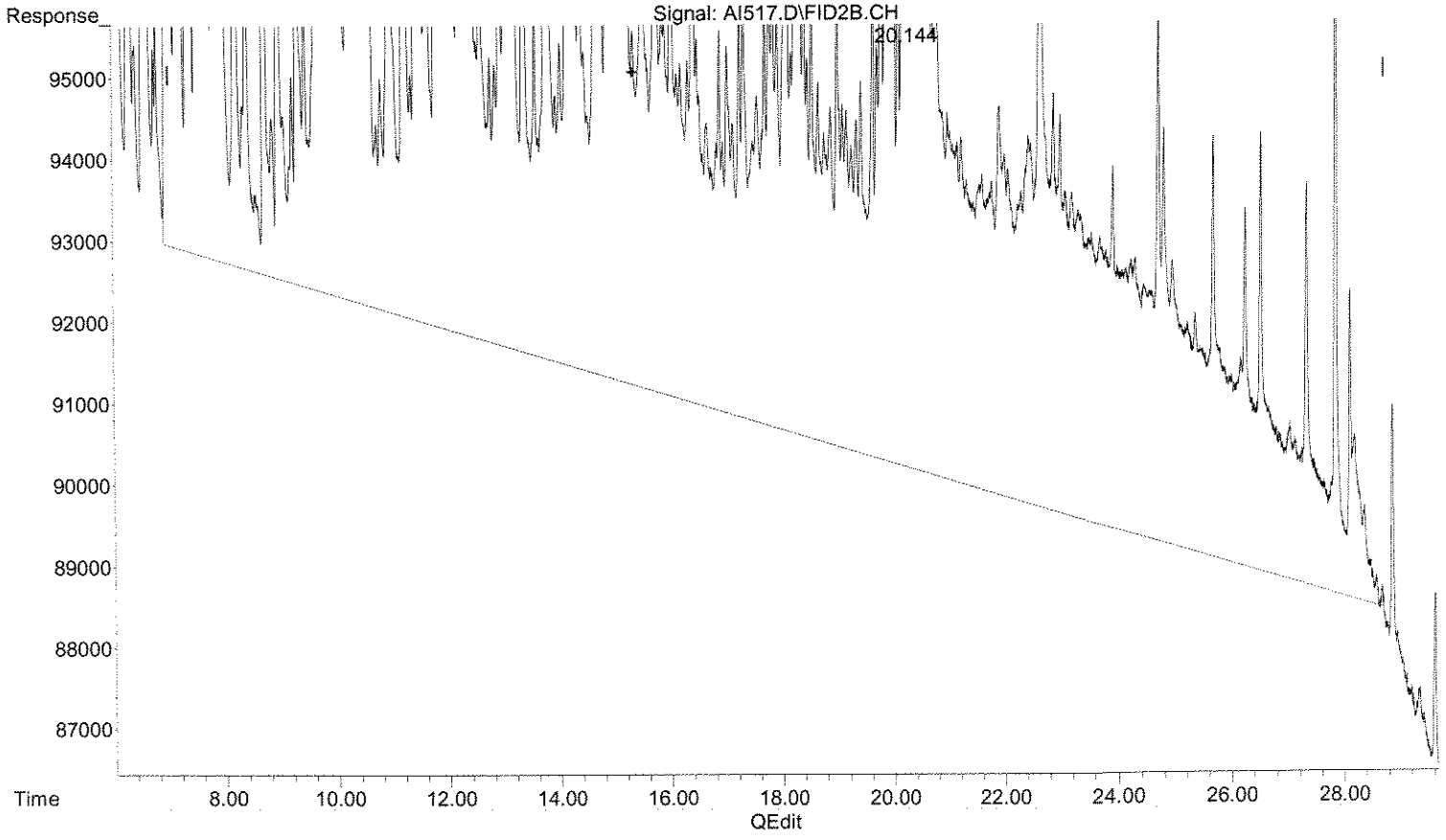
00341

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI517.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 2:29 pm
Operator : b.allgeier
Sample : R0904917-001
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:30 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 74.706mg/l m

response 70529468

A
BA 9/15

MW 9/11

(+) = Expected Retention Time

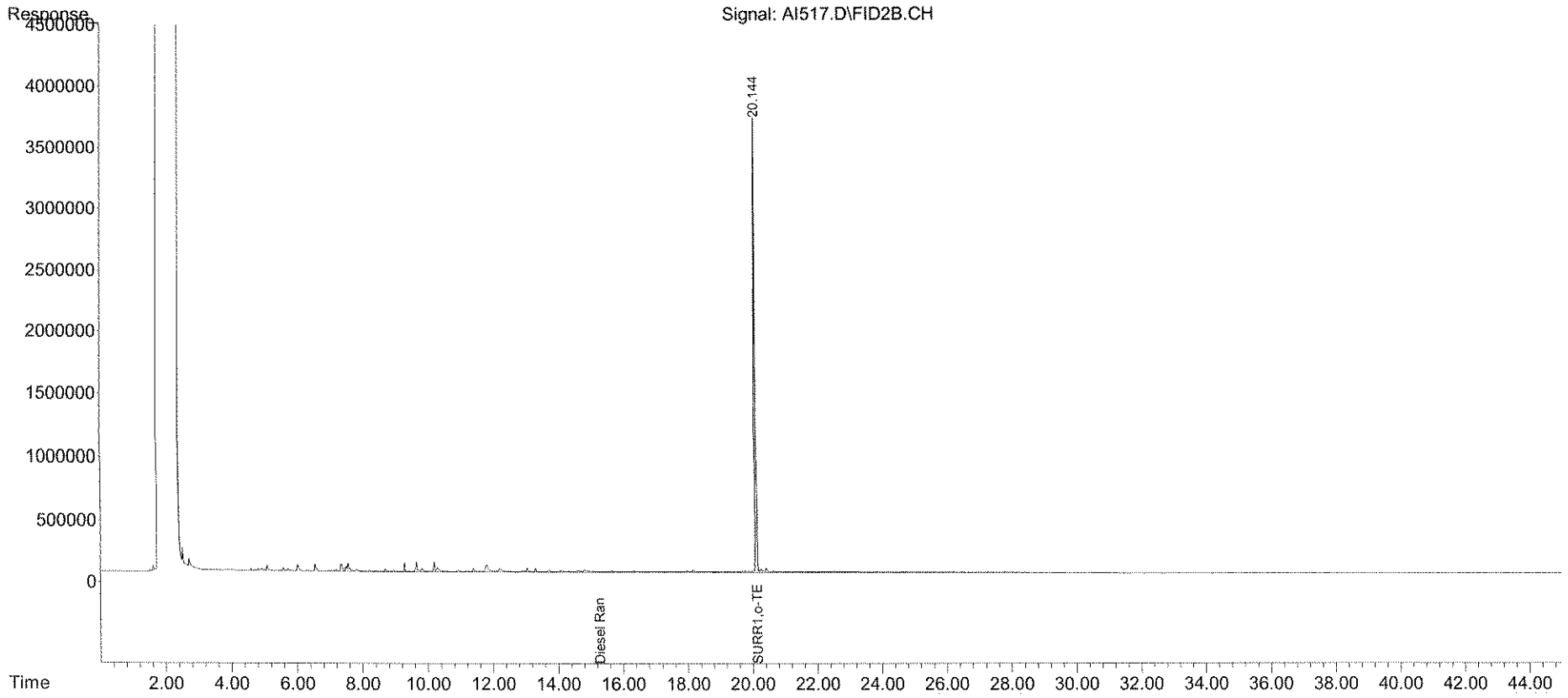
00342

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI517.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 2:29 pm
Operator : b.allgeier
Sample : R0904917-001
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:31:31 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI517.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 2:29 pm
Operator : b.allgeier
Sample : ~~R0904917-001~~ R0904817-001
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:30 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.145	86618032	84.75	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 84.75%		
Target Compounds				
2) HC Diesel Range Organics	15.265	82753852	87.65	mg/l
3) HC Oil Range Organics	31.442	9570873	13.99	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

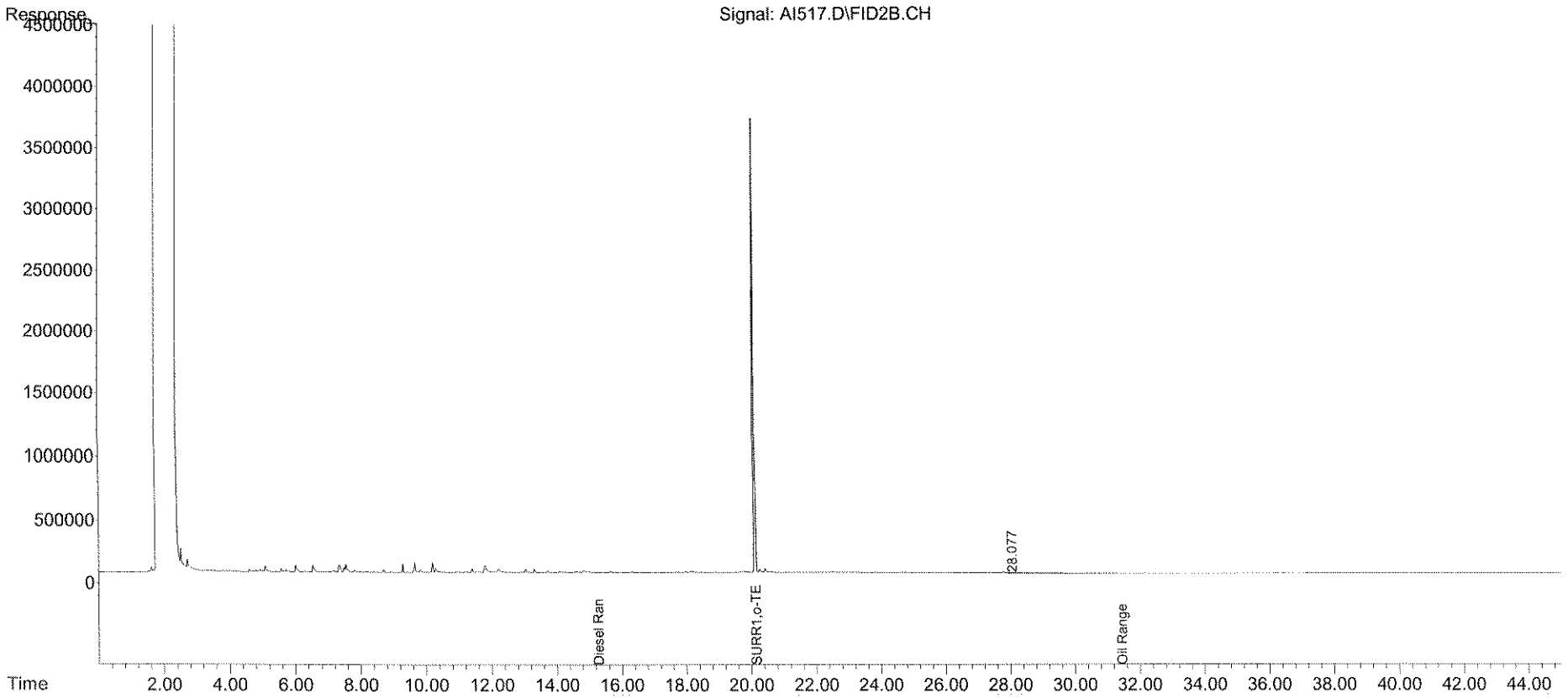
ORIGINAL

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI517.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 2:29 pm
Operator : b.allgeier
Sample : R0904917-001
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:30 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	**78**	J	94	75	1	9/ 2/09	9/14/09 15:20	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 15:20	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	84	51-117	9/14/09 15:20		

Comments:

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI518.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 3:20 pm
Operator : b.allgeier
Sample : ~~R0904917-002~~ R0904817-002
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:32:59 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.146	86104210	84.25	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 84.25%		
Target Compounds				
2) HC Diesel Range Organics	15.265	78546126	83.20	mg/l M
3) HC Oil Range Organics	0.000	0	N.D.	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA
9/15

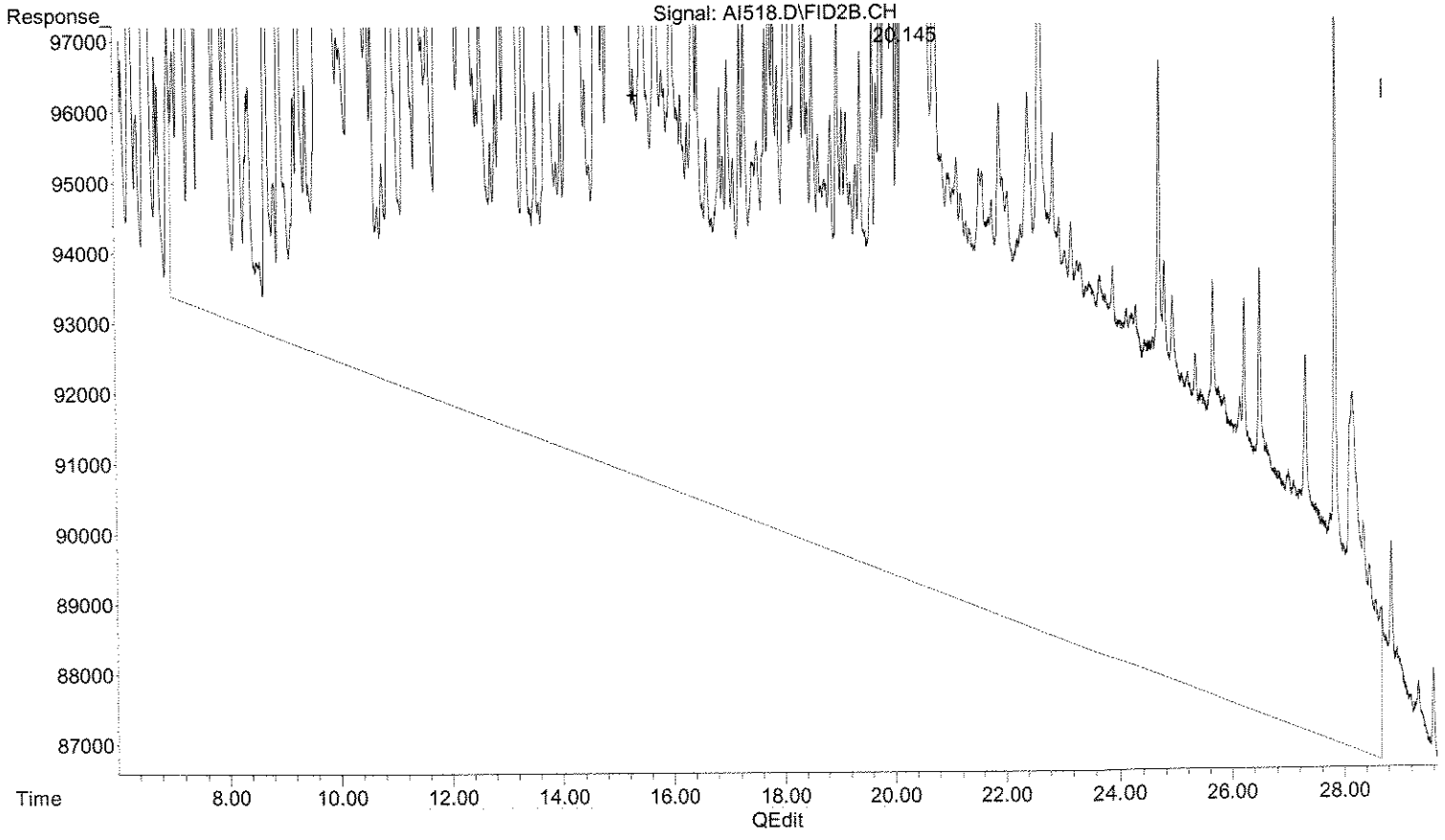
00347

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI518.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 3:20 pm
Operator : b.allgeier
Sample : R0904917-002
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:33 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 95.680mg/l m

response 90330342

B
(BAD RUN)

(+) = Expected Retention Time

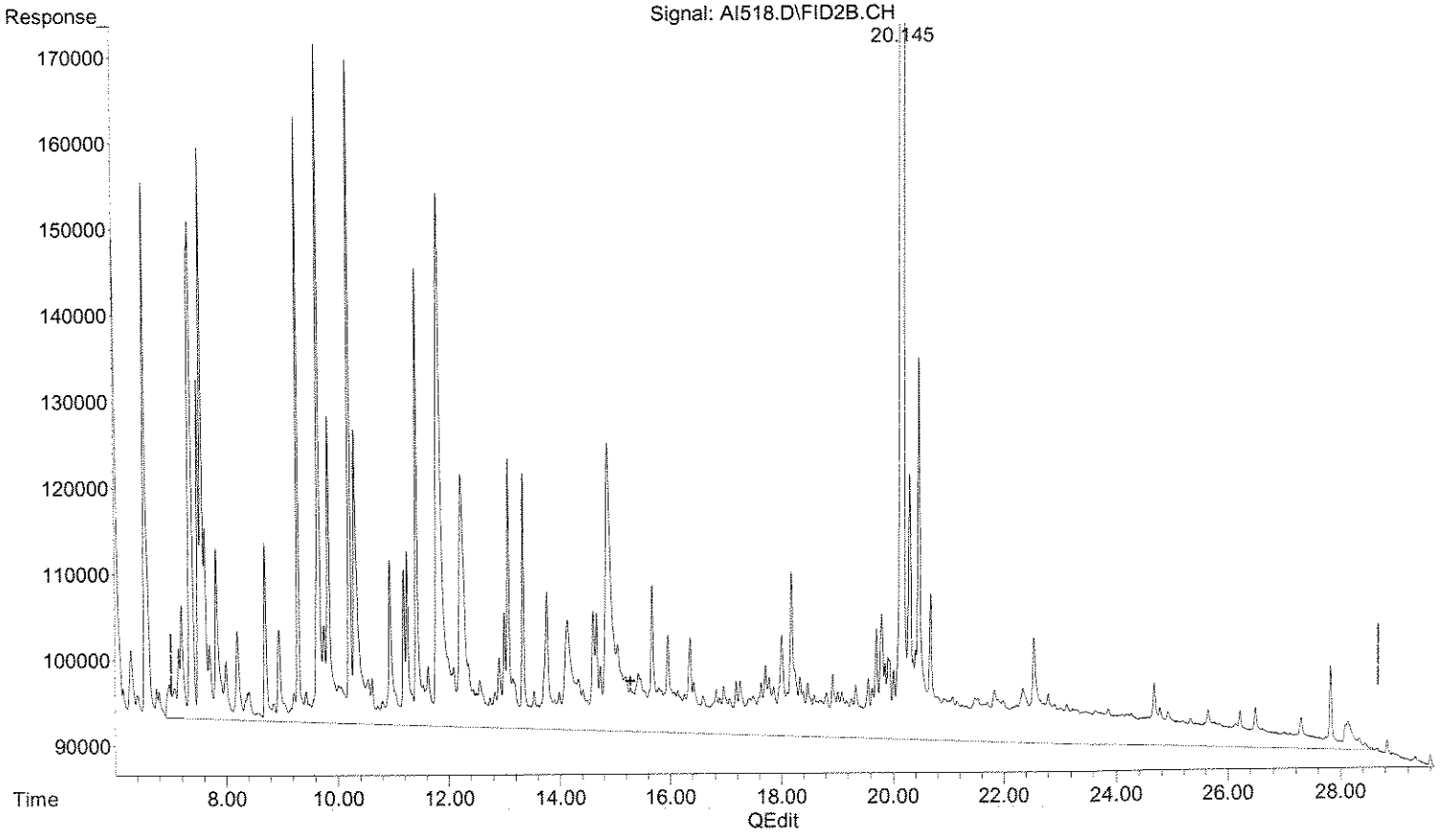
00348

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI518.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 3:20 pm
Operator : b.allgeier
Sample : R0904917-002
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:33 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 83.198mg/l m

response 78546126

(+) = Expected Retention Time

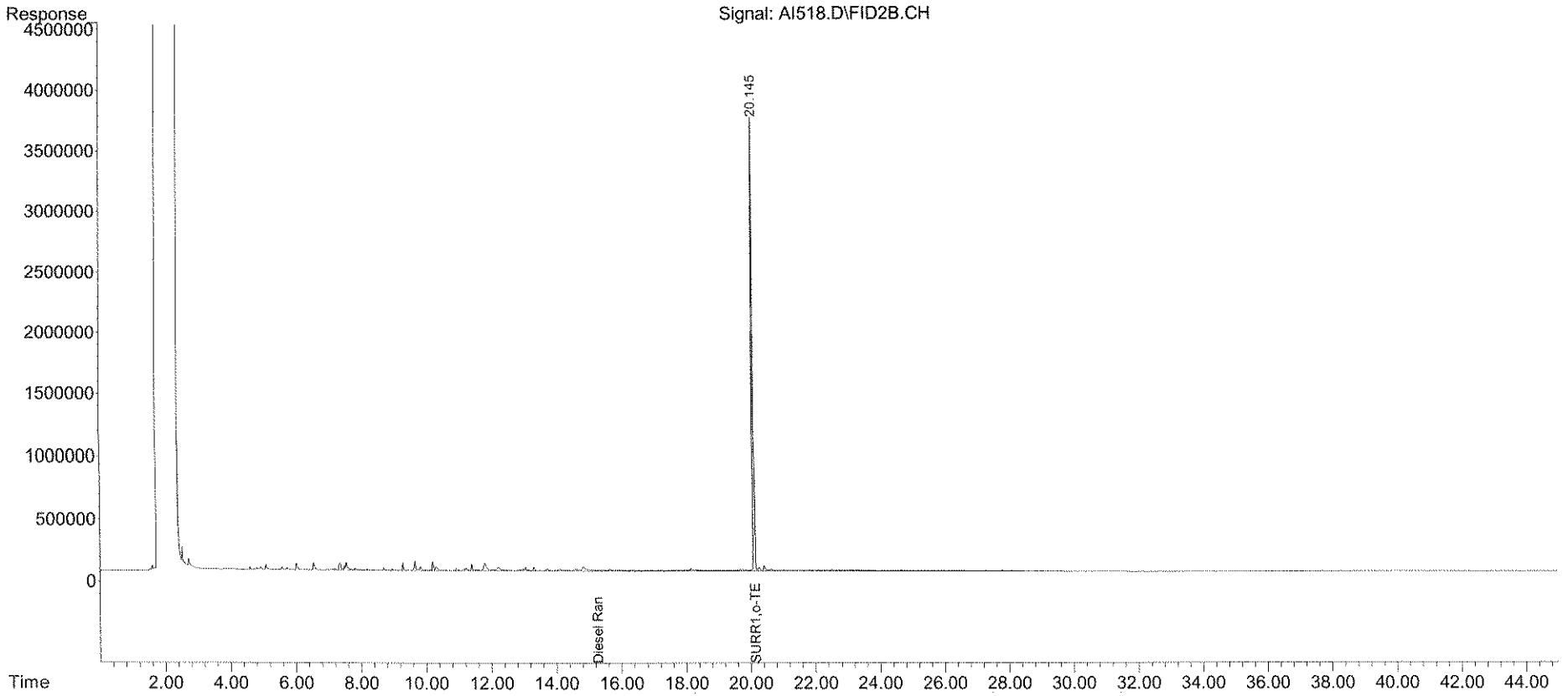
00345

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI518.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 3:20 pm
Operator : b.allgeier
Sample : R0904917-002
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:32:59 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI518.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 3:20 pm
Operator : b.allgeier
Sample : R0904917-002
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:33 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.146	86104210	84.25	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 84.25%		
Target Compounds				
2) HC Diesel Range Organics	15.265	90330342	95.68	mg/l
3) HC Oil Range Organics	31.442	10375524	15.17	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

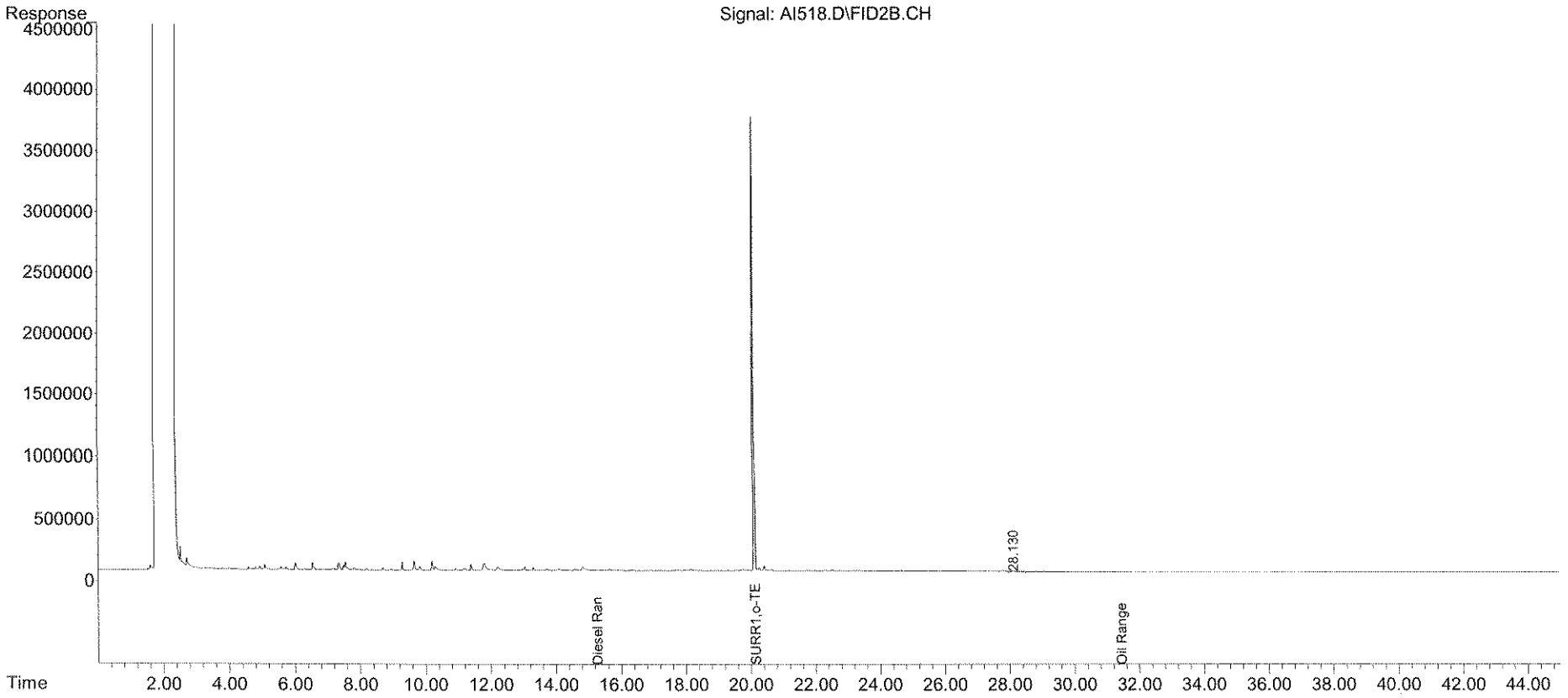
Original

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI518.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 3:20 pm
Operator : b.allgeier
Sample : R0904917-002
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:33 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



DIESEL RANGE ORGANICS

STANDARDS DATA

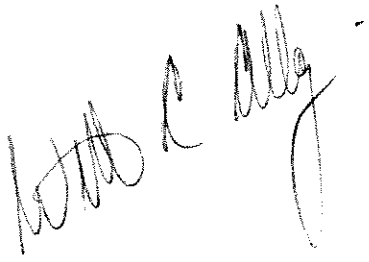
Response Factor Report HP G1530A

Method Path : J:\ACQUDATA\6890I\methods\
Method File : ORO0908.M
Title : EPA Method 8015B Deisel and Oil Range Organics
Last Update : Wed Sep 09 08:17:47 2009
Response Via : Initial Calibration

Calibration Files
1 =AI406.D 2 =AI405.D 3 =AI404.D
4 =AI403.D 5 =AI402.D

		Compound	1	2	3	4	5	Avg		%RSD
1)	S	SURR1,o-TERPHENYL	1.078	1.010	1.094	0.904	1.024	1.022	E6	7.33
2)	HC	Diesel Range Organics	0.961	0.942	1.019	0.854	0.944	0.944	E6	6.24
3)	HC	Oil Range Organics	7.073	6.728	7.613	6.145	6.640	6.840	E5	7.96

(#) = Out of Range



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI402.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 12:35 am
Operator : b.allgeier
Sample : LOW
Misc : 09/08/09
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:14:43 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.092	10236150	10.4039 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery =	10.40%#
Target Compounds			
2) HC Diesel Range Organics	15.265	94407278	103.5184 mg/l
3) HC Oil Range Organics	31.442	46477696	69.5121 mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA

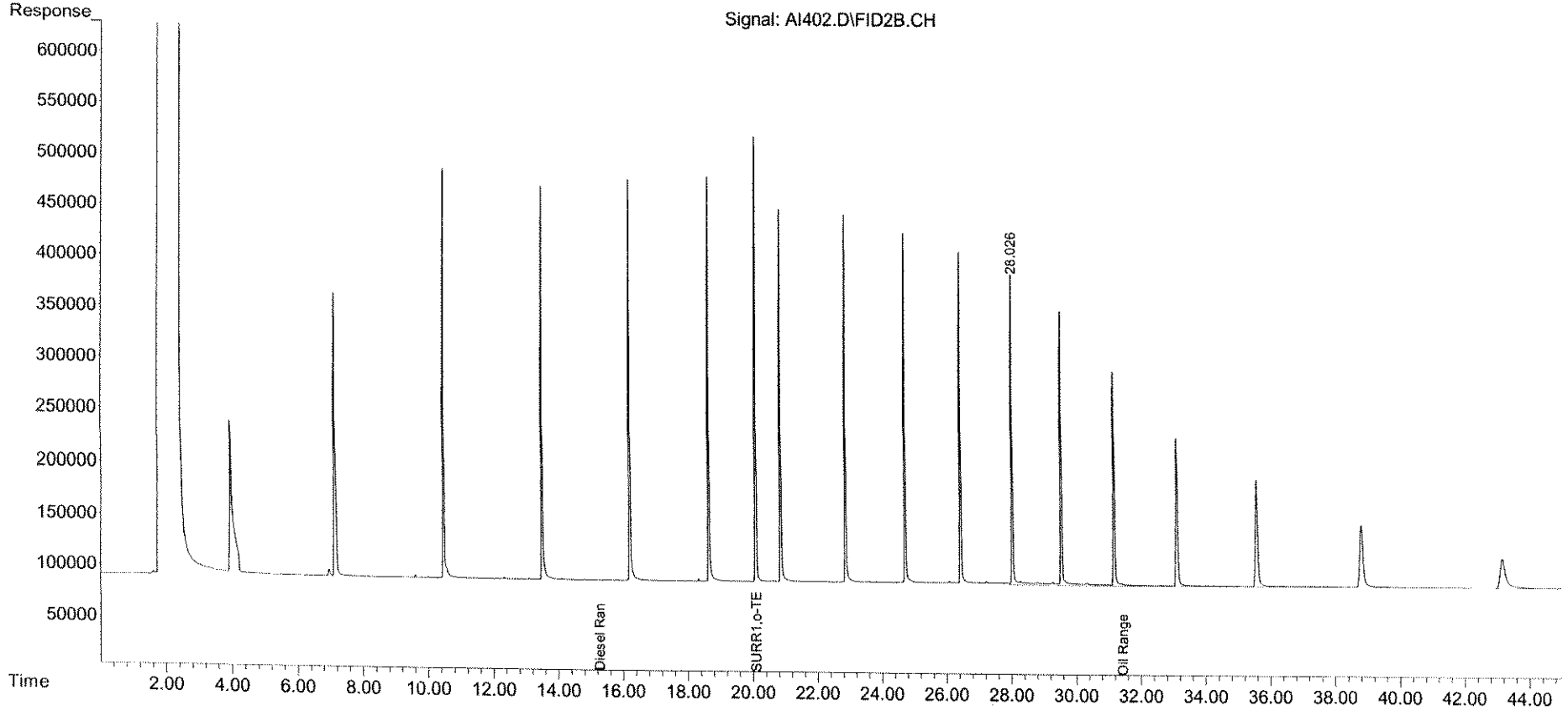
9/9

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI402.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 12:35 am
Operator : b.allgeier
Sample : LOW
Misc : 09/08/09
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:14:43 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI403.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 1:26 am
Operator : b.allgeier
Sample : MED LOW
Misc : 09/08/09
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:15:12 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.092	18082455	18.3788 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 18.38%#	
Target Compounds			
2) HC Diesel Range Organics	15.265	427207106	468.4362 mg/l
3) HC Oil Range Organics	31.442	215090935	321.6901 mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA

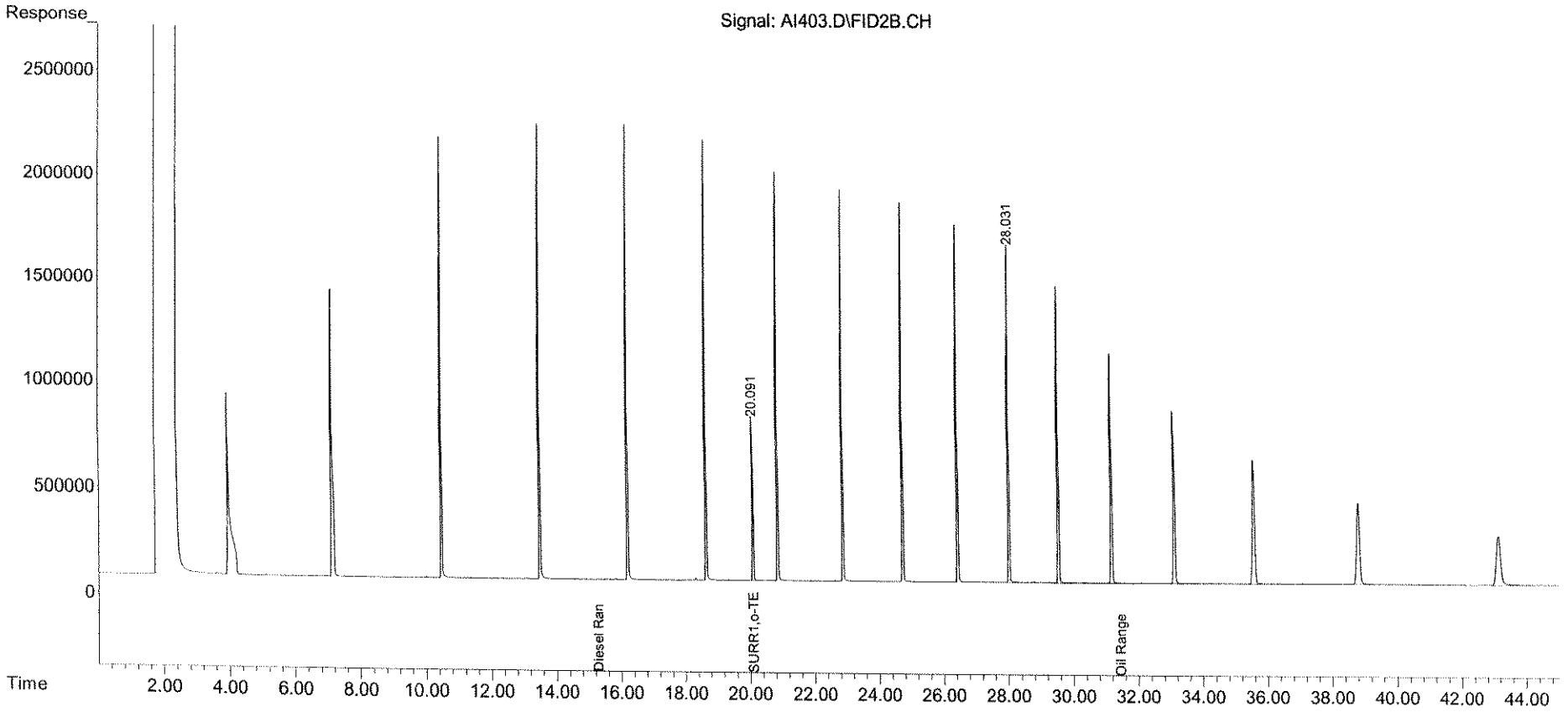
9/9

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI403.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 1:26 am
Operator : b.allgeier
Sample : MED LOW
Misc : 09/08/09
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:15:12 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI404.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 2:17 am
Operator : b.allgeier
Sample : MED
Misc : 09/08/09
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:15:44 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.097	43771803	44.4891 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery =	44.49%#
Target Compounds			
2) HC Diesel Range Organics	15.265	1018538616	1116.8363 mg/l
3) HC Oil Range Organics	31.442	532893459	796.9957 mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA

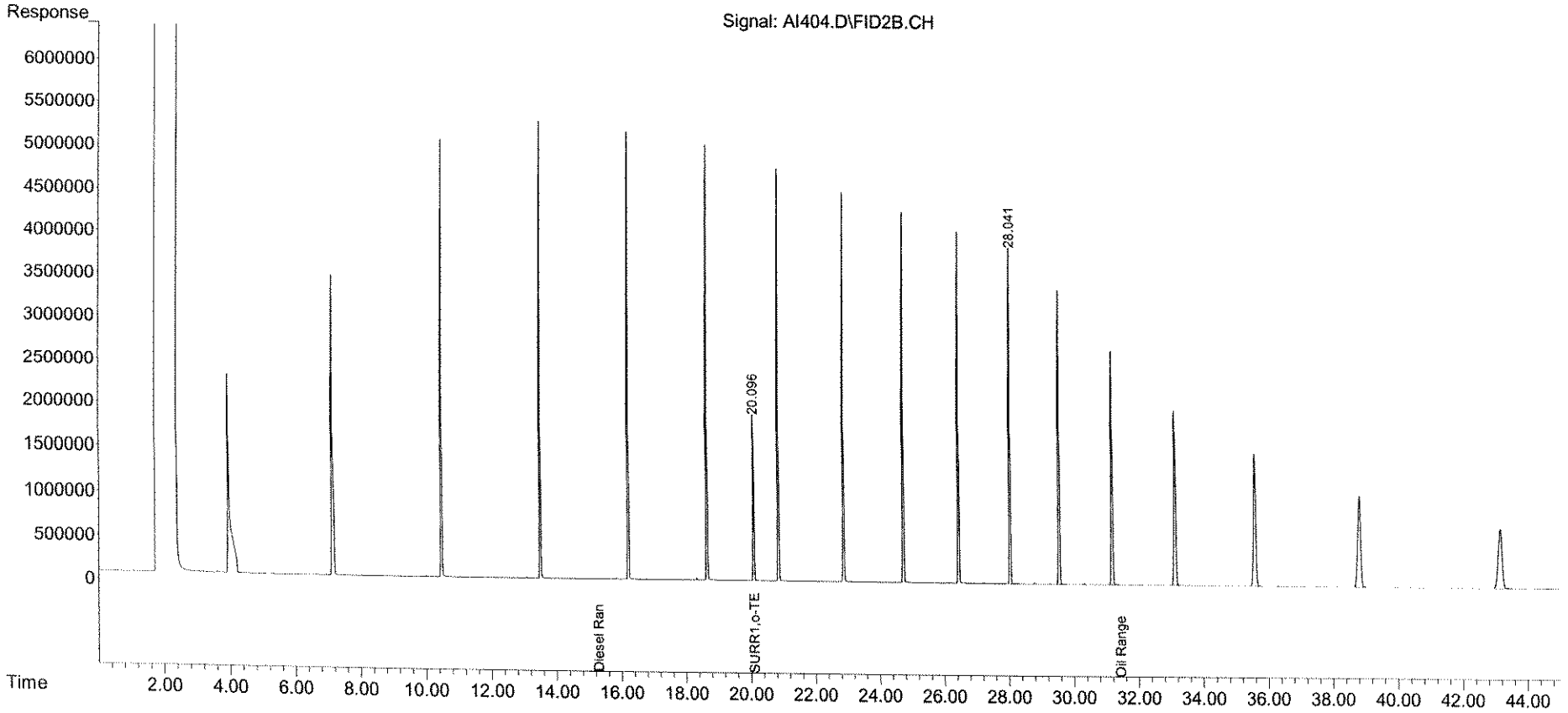
9/9

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI404.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 2:17 am
Operator : b.allgeier
Sample : MED
Misc : 09/08/09
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:15:44 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI405.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 3:08 am
Operator : b.allgeier
Sample : MED HIGH
Misc : 09/08/09
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:16:17 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.104	80786535	82.1104 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 82.11%	
Target Compounds			
2) HC Diesel Range Organics	15.265	1884883162	2066.7905 mg/l
3) HC Oil Range Organics	31.442	941866642	1408.6562 mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

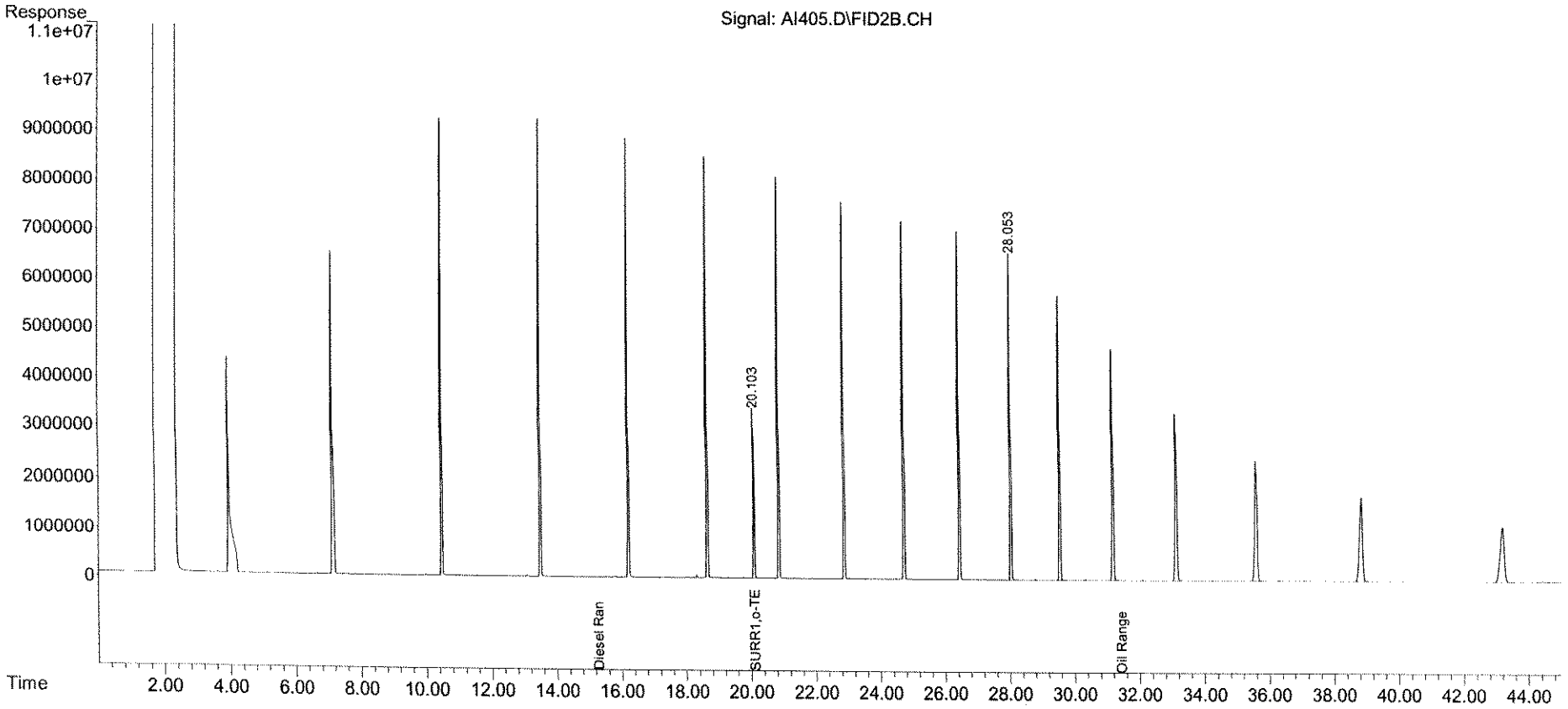
BA
9/9

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI405.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 3:08 am
Operator : b.allgeier
Sample : MED HIGH
Misc : 09/08/09
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:16:17 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI406.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 3:59 am
Operator : b.allgeier
Sample : HIGH
Misc : 09/08/09
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:16:38 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.108	107819951	109.5868 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 109.59%	
Target Compounds			
2) HC Diesel Range Organics	15.265	4804964566	5268.6846 mg/l
3) HC Oil Range Organics	31.442	2475721953	3702.6910 mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

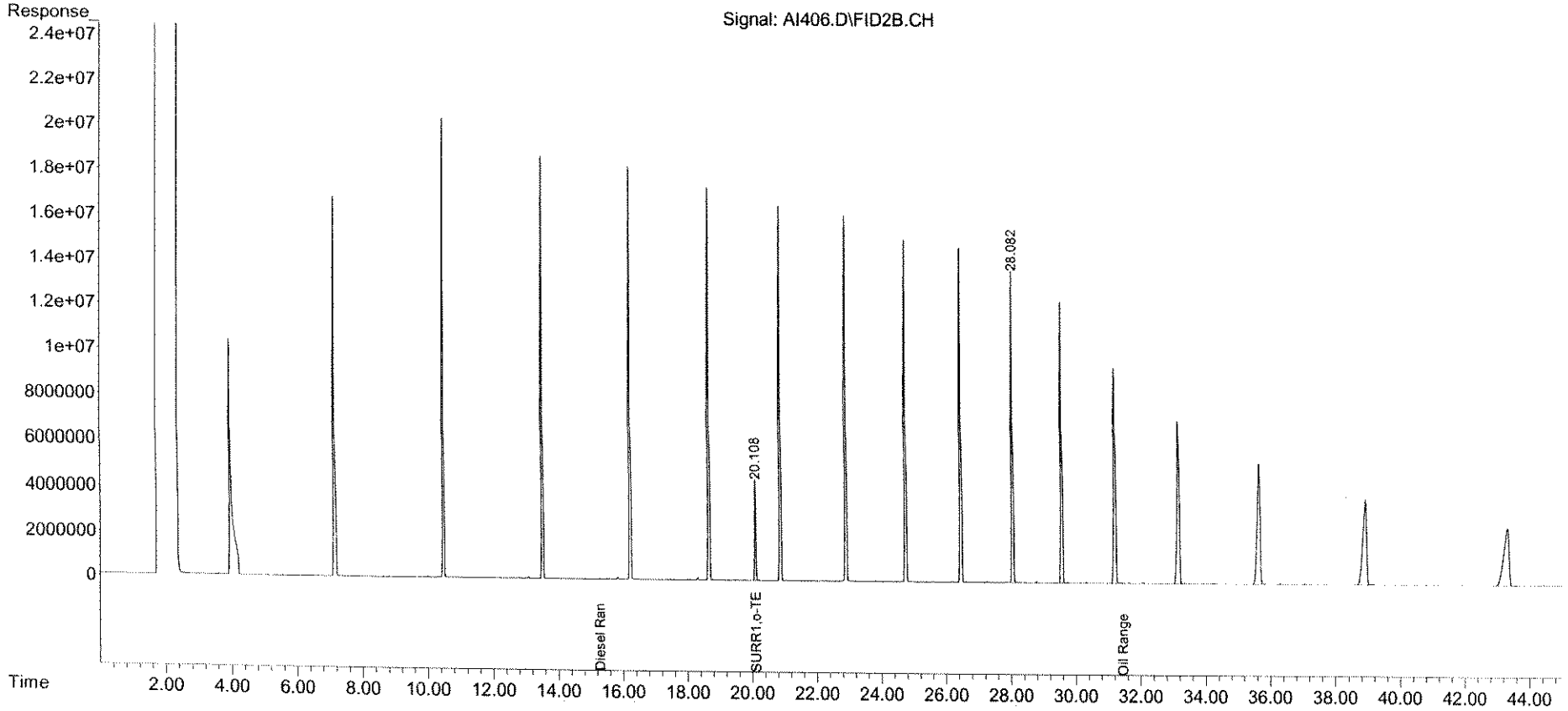
BA
9/9

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI406.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 3:59 am
Operator : b.allgeier
Sample : HIGH
Misc : 09/08/09
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:16:38 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 08 20:11:54 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI401.D
Signal(s) : FID2B.CH
Acq On : 08 Sep 2009 11:44 pm
Operator : b.allgeier
Sample : INST BLK
Misc : 09/08/09
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:53:45 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	0.000	0	N.D. mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery =	0.00%#
Target Compounds			
2) HC Diesel Range Organics	~~15.265~~	~~7034854~~	~~7.4514 mg/l~~
3) HC Oil Range Organics	~~31.442~~	~~5599923~~	~~8.1873 mg/l~~

(f)=RT Delta > 1/2 Window (m)=manual int.

BA

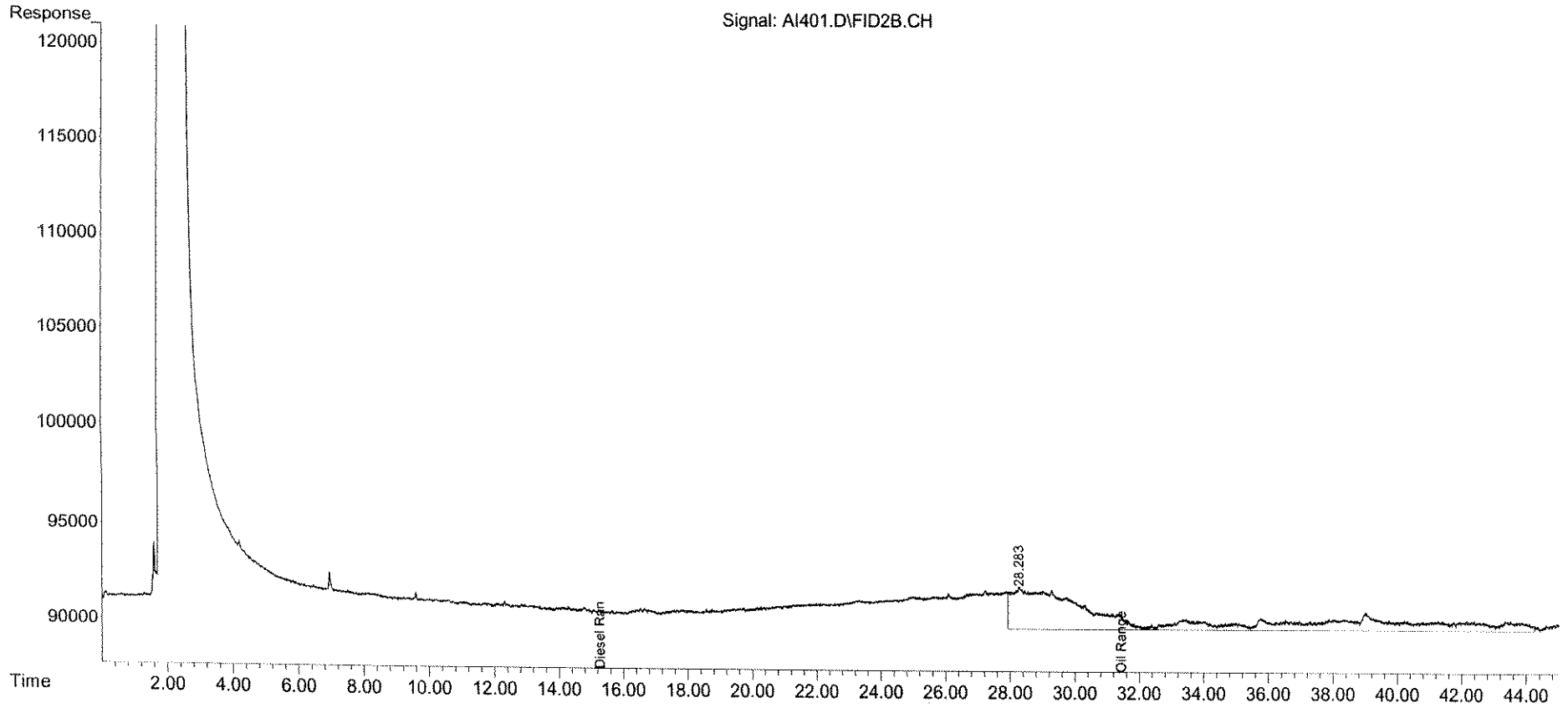
9/9

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090809\
Data File : AI401.D
Signal(s) : FID2B.CH
Acq On : 08 Sep 2009 11:44 pm
Operator : b.allgeier
Sample : INST BLK
Misc : 09/08/09
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 08:53:45 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890I\DATA\090909\
Data File : AI415.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 9:05 am
Operator : b.allgeier
Sample : ICV
Misc : 9/9/09
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 09:51:08 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

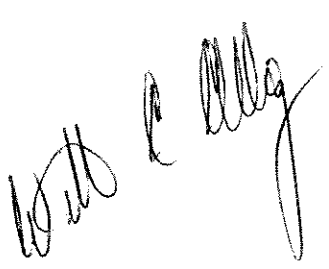
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
2 HC	Diesel Range Organics	944.092	961.925 E3	-1.9	113	0.00

Evaluate Continuing Calibration Report - Not Founds

1 S	SURR1,o-TERPHENYL	1.022	0.000 E6	100.0#	0#	-20.10#
3 HC	Oil Range Organics	683.980	0.000 E3	100.0#	0#	-31.44#

(#) = Out of Range SPCC's out = 0 CCC's out = 1



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090909\
Data File : AI415.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 9:05 am
Operator : b.allgeier
Sample : ICV
Misc : 9/9/09
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 09:51:08 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	0.000	0	N.D. mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery =	0.00%#
Target Compounds			
2) HC Diesel Range Organics	15.265	480962308	509.4443 mg/l
3) HC Oil Range Organics	0.000	0	N.D. mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA

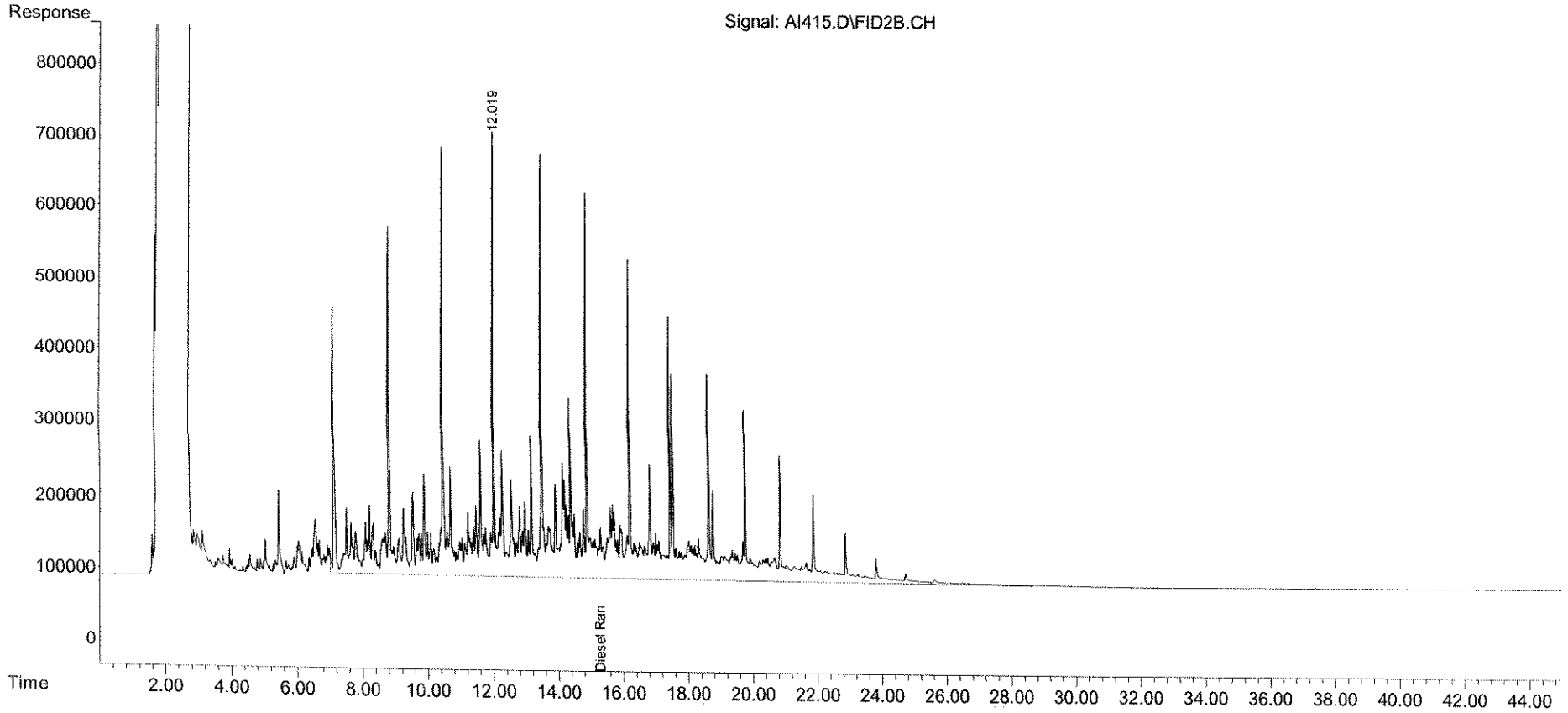
9/9

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\090909\
Data File : AI415.D
Signal(s) : FID2B.CH
Acq On : 09 Sep 2009 9:05 am
Operator : b.allgeier
Sample : ICV
Misc : 9/9/09
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 09 09:51:08 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



8D

Diesel Range Organics

Analytical Sequence

Lab Name: Columbia Analytical Services *Client:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0904817 *SAS No.:* _____ *SDG No.:* SA64-10BSPLP2

GC Column(1) *(ID):*

Instrument ID:

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

O-TER 20.10

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*O-TER rt_time*
LOW	LOW	9/9/2009	0:35	20.09
MED LOW	MED LOW	9/9/2009	1:26	20.09
MED	MED	9/9/2009	2:17	20.10
MED HIGH	MED HIGH	9/9/2009	3:08	20.10
HIGH	HIGH	9/9/2009	3:59	20.11
CCV10	CCV10	9/14/2009	9:20	20.14
PBLK1	RQ0908132-01	9/14/2009	10:13	20.14
PBLK1MS	RQ0908132-02	9/14/2009	11:04	20.14
PBLK1MSD	RQ0908132-03	9/14/2009	11:55	20.14
ZZZZZ	ZZZZZ	9/14/2009	12:46	20.14
ZZZZZ	ZZZZZ	9/14/2009	13:37	20.14
SA64-10BSPLP2	R0904817-001	9/14/2009	14:29	20.14
SA64-10BSPLP3	R0904817-002	9/14/2009	15:20	20.15
EQB1	RQ0908042-01	9/14/2009	16:11	20.14
EQB2	RQ0908043-01	9/14/2009	17:02	20.14
ZZZZZ	ZZZZZ	9/14/2009	17:53	20.15
CCV11	CCV11	9/14/2009	18:45	20.15
CCV11B	CCV11B	9/14/2009	19:36	20.15

QC Limit

o-Ter = o-Terphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI511.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 9:20 am
Operator : b.allgeier
Sample : CCV10
Misc : 09/14/09 MH
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 14 10:05:55 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

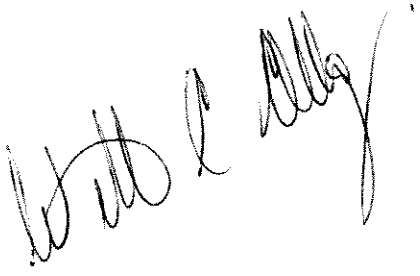
Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	SURR1,o-TERPHENYL	1.022	1.011 E6	1.1	100	0.04
2	HC	Diesel Range Organics	944.092	953.876 E3	-1.0	101	0.00
3	HC	Oil Range Organics	683.980	782.643 E3	-14.4	116	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI511.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 9:20 am
Operator : b.allgeier
Sample : CCV10
Misc : 09/14/09 MH
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 14 10:05:55 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.139	80867481	79.1257 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 79.13%	
Target Compounds			
2) HC Diesel Range Organics	15.265	1907751435	2020.7262 mg/l
3) HC Oil Range Organics	31.442	1095700877	1601.9487 mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA
9/14

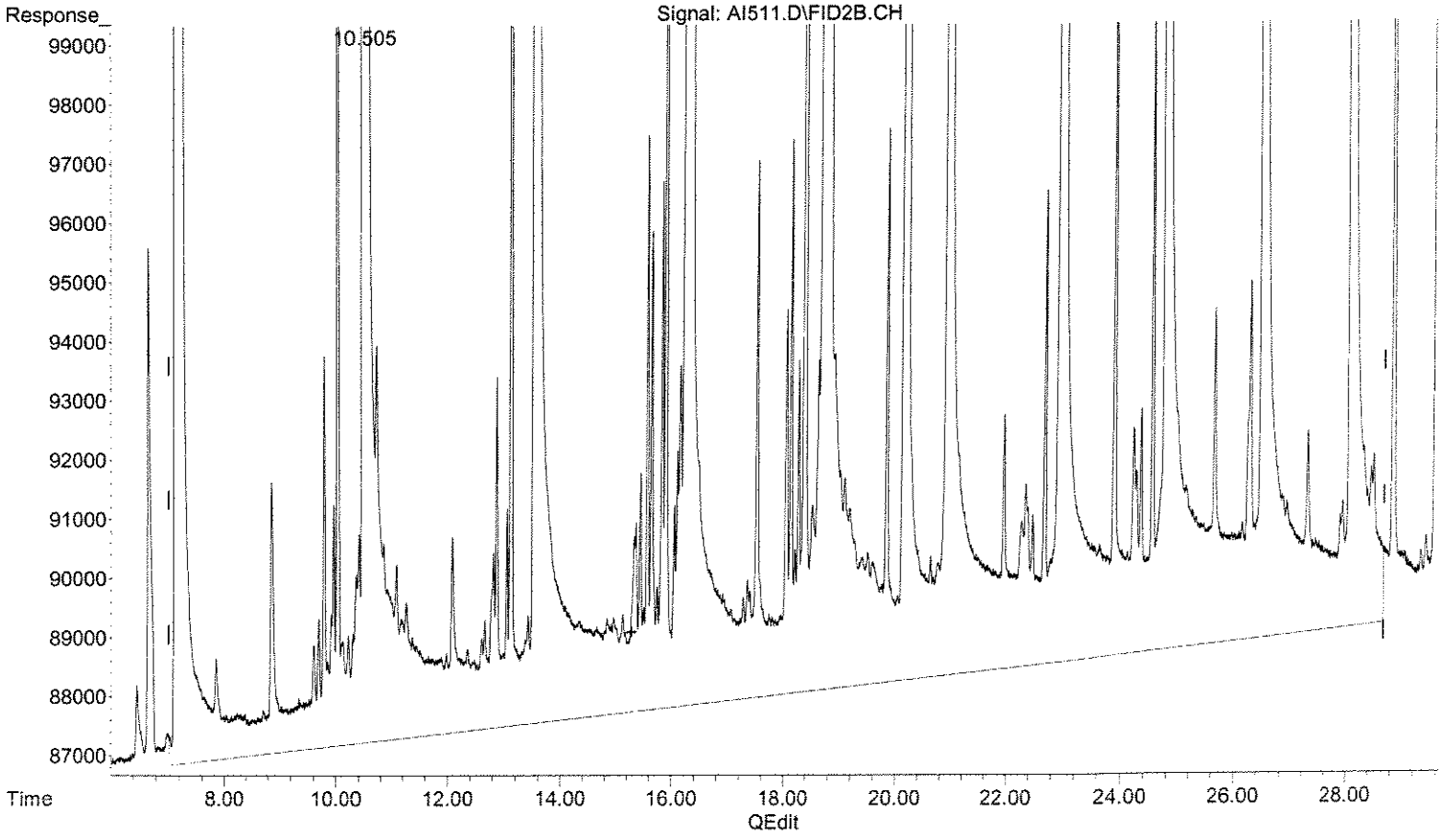
00372

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI511.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 9:20 am
Operator : b.allgeier
Sample : CCV10
Misc : 09/14/09 MH
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 14 10:05:32 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 2029.984mg/l m

response 1916491649

B
(BAD INT.)

(+) = Expected Retention Time

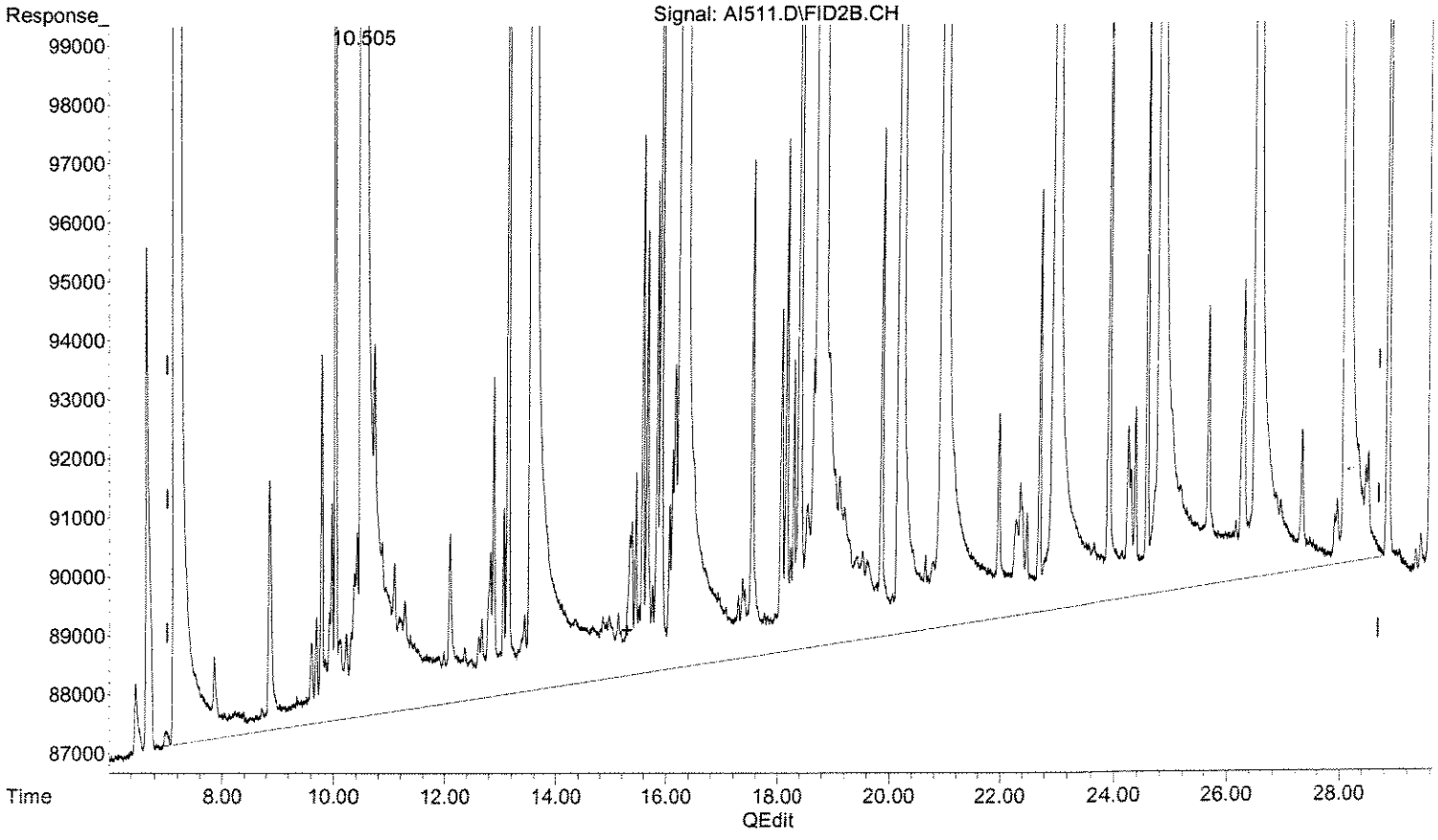
00373

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI511.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 9:20 am
Operator : b.allgeier
Sample : CCV10
Misc : 09/14/09 MH
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 14 10:05:32 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 2020.726mg/l m

response 1907751435

MW 9/15

A BA9/14

(+) = Expected Retention Time

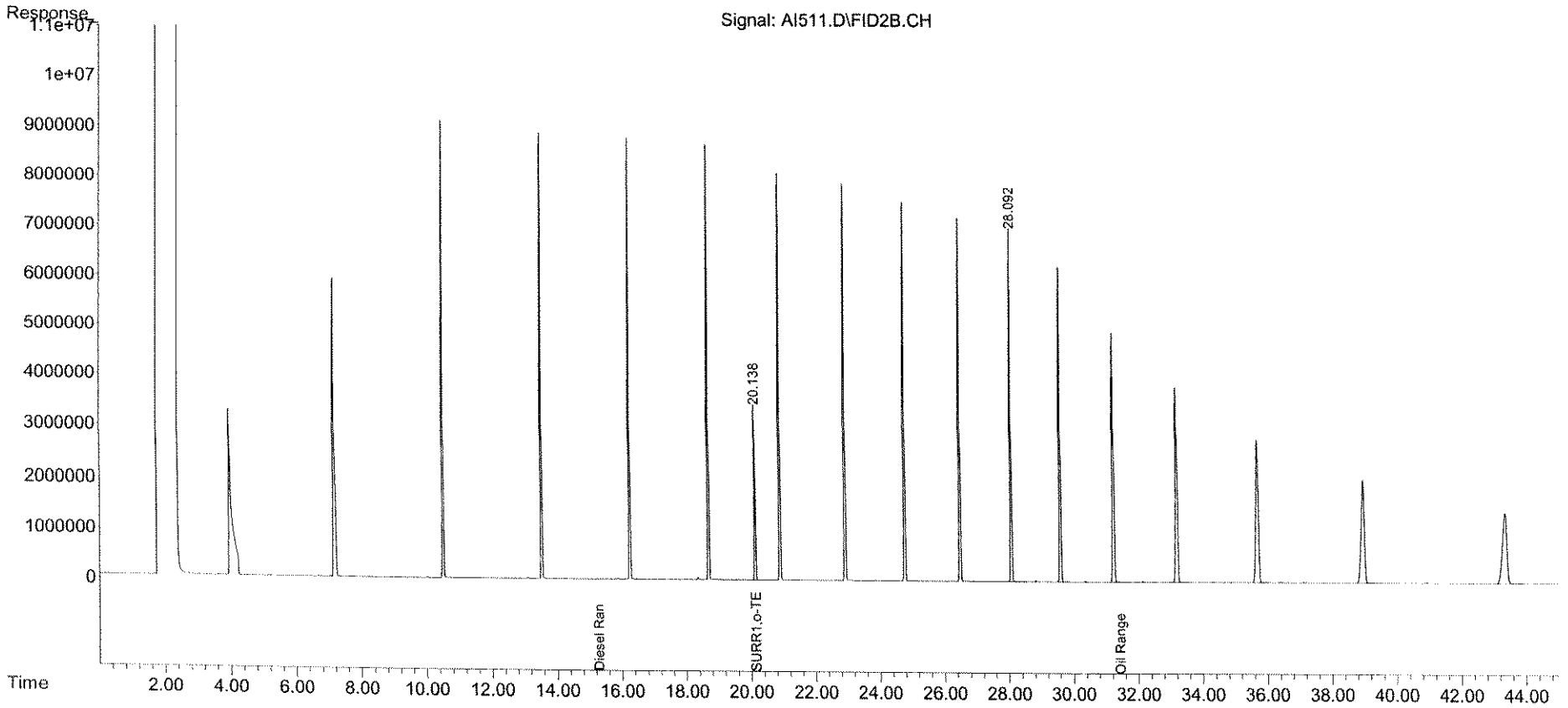
00374

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI511.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 9:20 am
Operator : b.allgeier
Sample : CCV10
Misc : 09/14/09 MH
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 14 10:05:55 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Wed Sep 09 08:17:47 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI522.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 6:45 pm
Operator : b.allgeier
Sample : CCV11
Misc : 09/14/09 MH
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:09:56 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

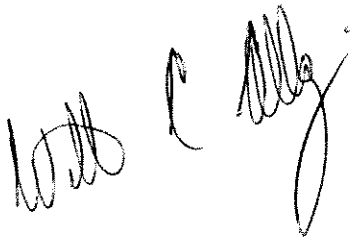
Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 S	SURR1,o-TERPHENYL	1.022	1.089 E6	-6.6	108	0.05
2 HC	Diesel Range Organics	944.092	1012.813 E3	-7.3	107	0.00
3 HC	Oil Range Organics	683.980	812.525 E3	-18.8#	121	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 1



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI522.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 6:45 pm
Operator : b.allgeier
Sample : CCV11
Misc : 09/14/09 MH
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:09:56 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.147	87099997	85.22	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 85.22%		
Target Compounds				
2) HC Diesel Range Organics	15.265	2025625900	2145.58	mg/l M
3) HC Oil Range Organics	31.442	1137534760	1663.11	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA

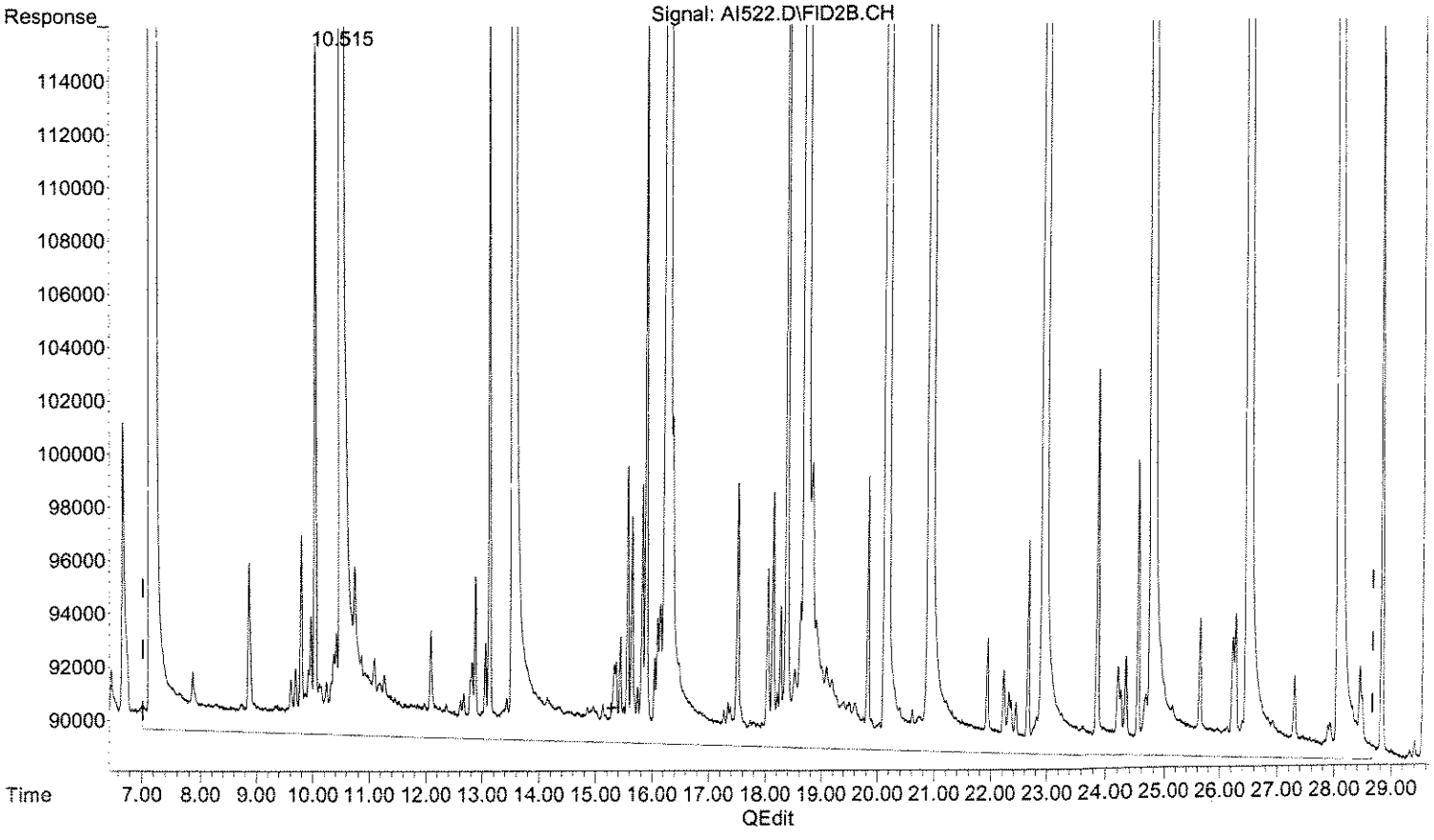
9/15

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI522.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 6:45 pm
Operator : b.allgeier
Sample : CCV11
Misc : 09/14/09 MH
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:09:25 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 2151.666mg/l m

response 2031370231

B

(BAD DUP)

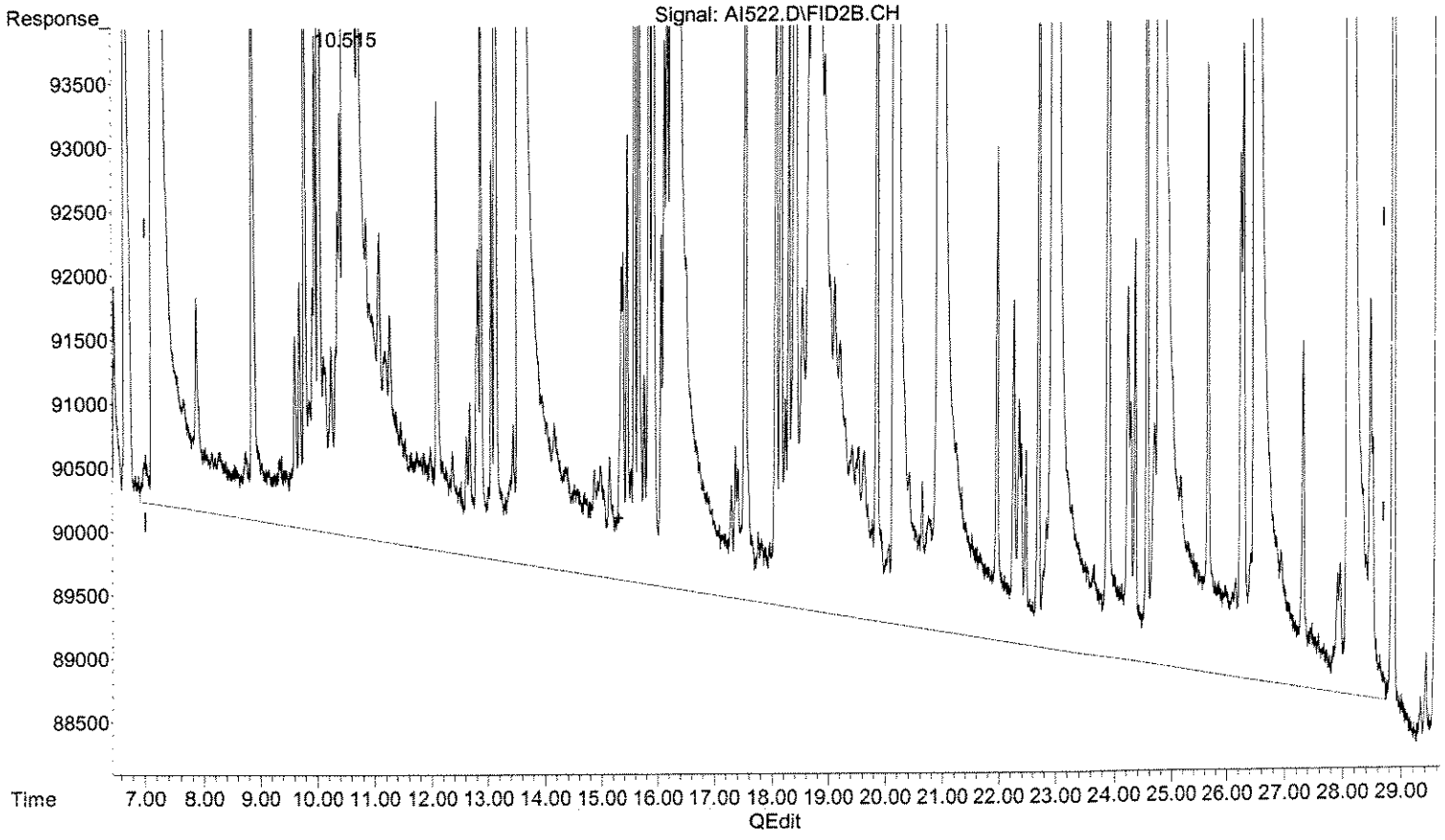
(+) = Expected Retention Time

Quantitation Report (QEdit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI522.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 6:45 pm
Operator : b.allgeier
Sample : CCV11
Misc : 09/14/09 MH
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:09:25 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 2145.581mg/l m

response 2025625900

MW 9/11

A
BA 9/15

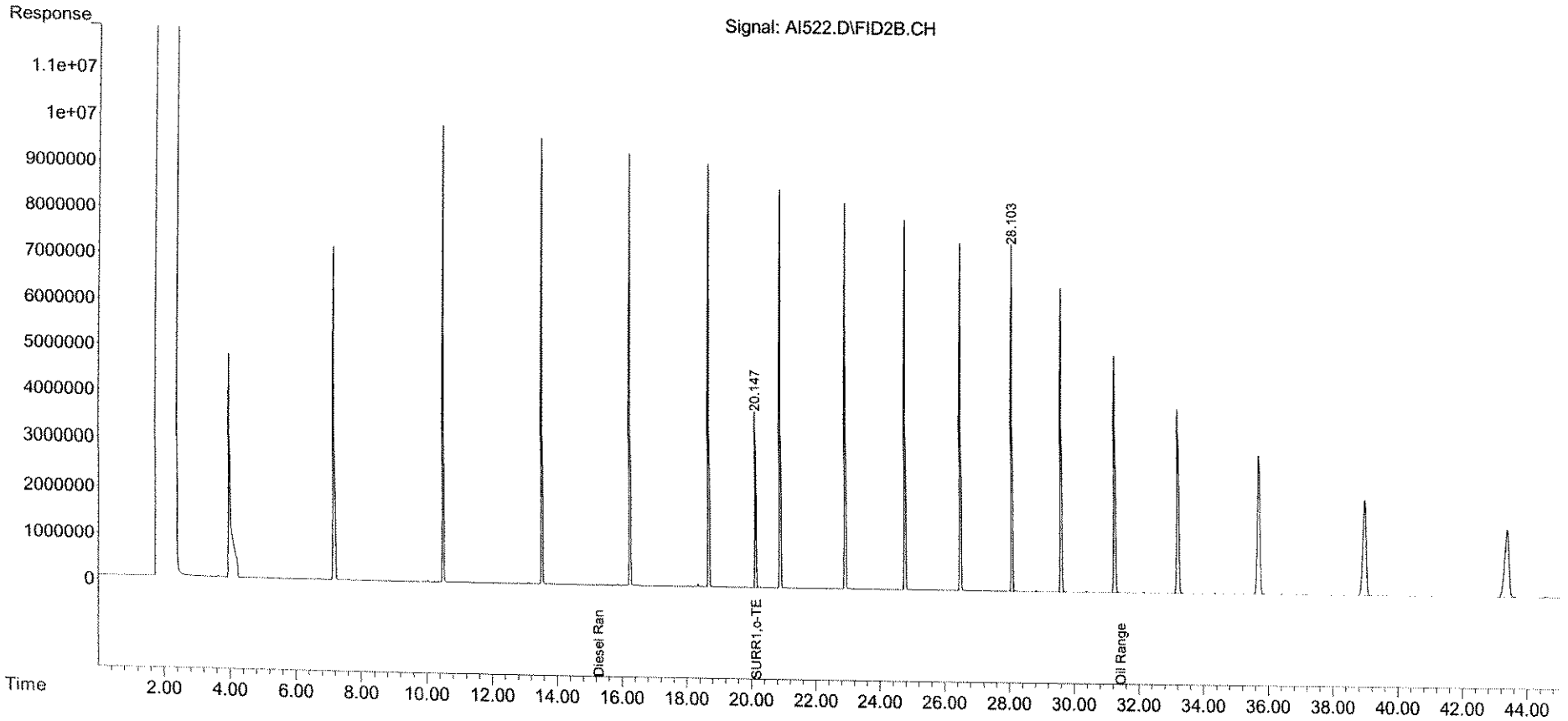
(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI522.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 6:45 pm
Operator : b.allgeier
Sample : CCV11
Misc : 09/14/09 MH
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:09:56 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



00386

DIESEL RANGE ORGANICS

RAW QC DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908042-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	94	75	1	9/ 2/09	9/14/09 16:11	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 16:11	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	71	51-117	9/14/09 16:11		

Comments:

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI519.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 4:11 pm
Operator : b.allgeier
Sample : RQ0908042-01
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:36 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.143	72241470	70.69	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 70.69%		
Target Compounds				
2) HC Diesel Range Organics	15.265	53723616	56.91	mg/l
3) HC Oil Range Organics	31.442	12645325	18.49	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

BA
9/15

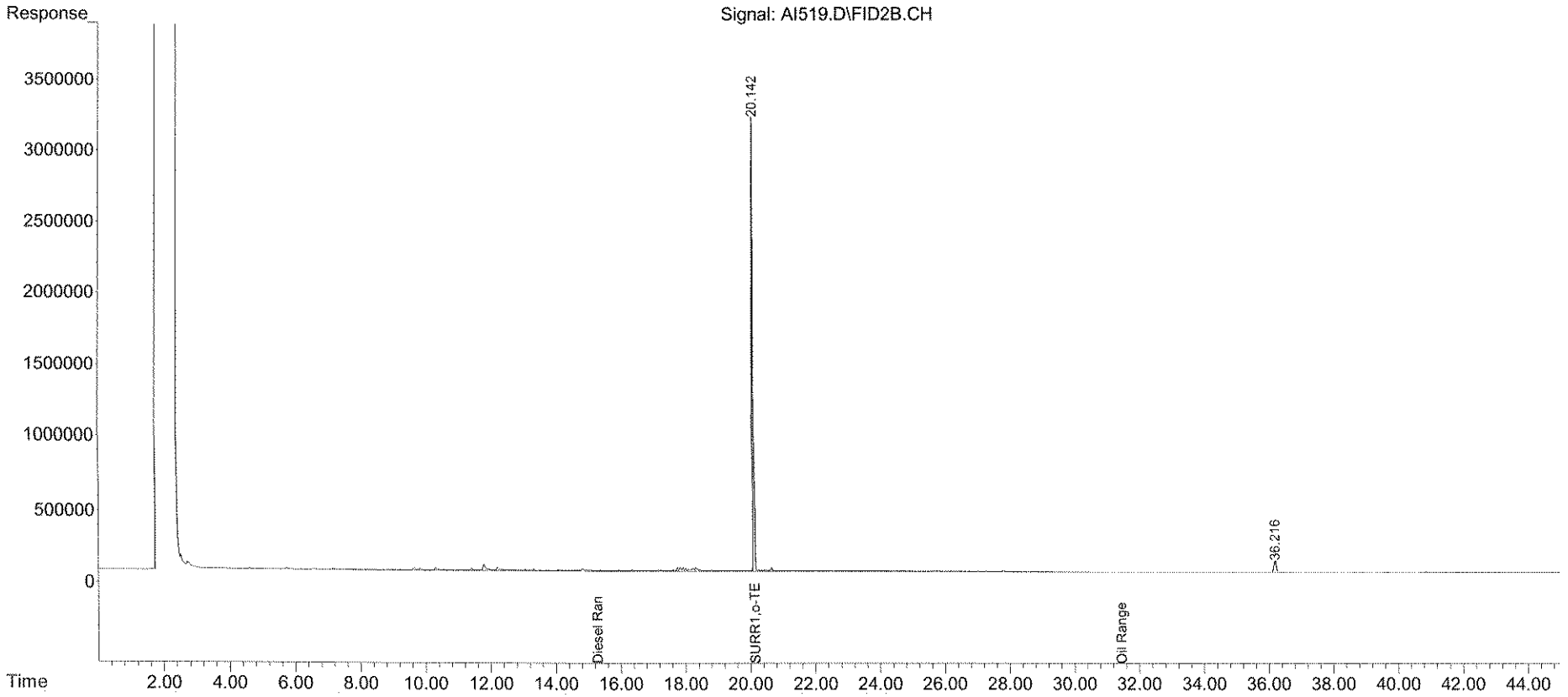
00383

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI519.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 4:11 pm
Operator : b.allgeier
Sample : RQ0908042-01
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:36 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: RQ0908043-01

Units: µg/L
Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1312

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	94	75	1	9/ 2/09	9/14/09 17:02	95174	170335	
C28 - C40 ORO	75	U	94	75	1	9/ 2/09	9/14/09 17:02	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	76	51-117	9/14/09 17:02		

Comments:

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI520.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 5:02 pm
Operator : b.allgeier
Sample : RQ0908043-01
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:39 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.145	78056076	76.37	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 76.37%		
Target Compounds				
2) HC Diesel Range Organics	~~15.265~~	~~66366928~~	~~70.30~~	~~mg/l~~
3) HC Oil Range Organics	~~31.442~~	~~15238035~~	~~22.28~~	~~mg/l~~

(f)=RT Delta > 1/2 Window (m)=manual int.

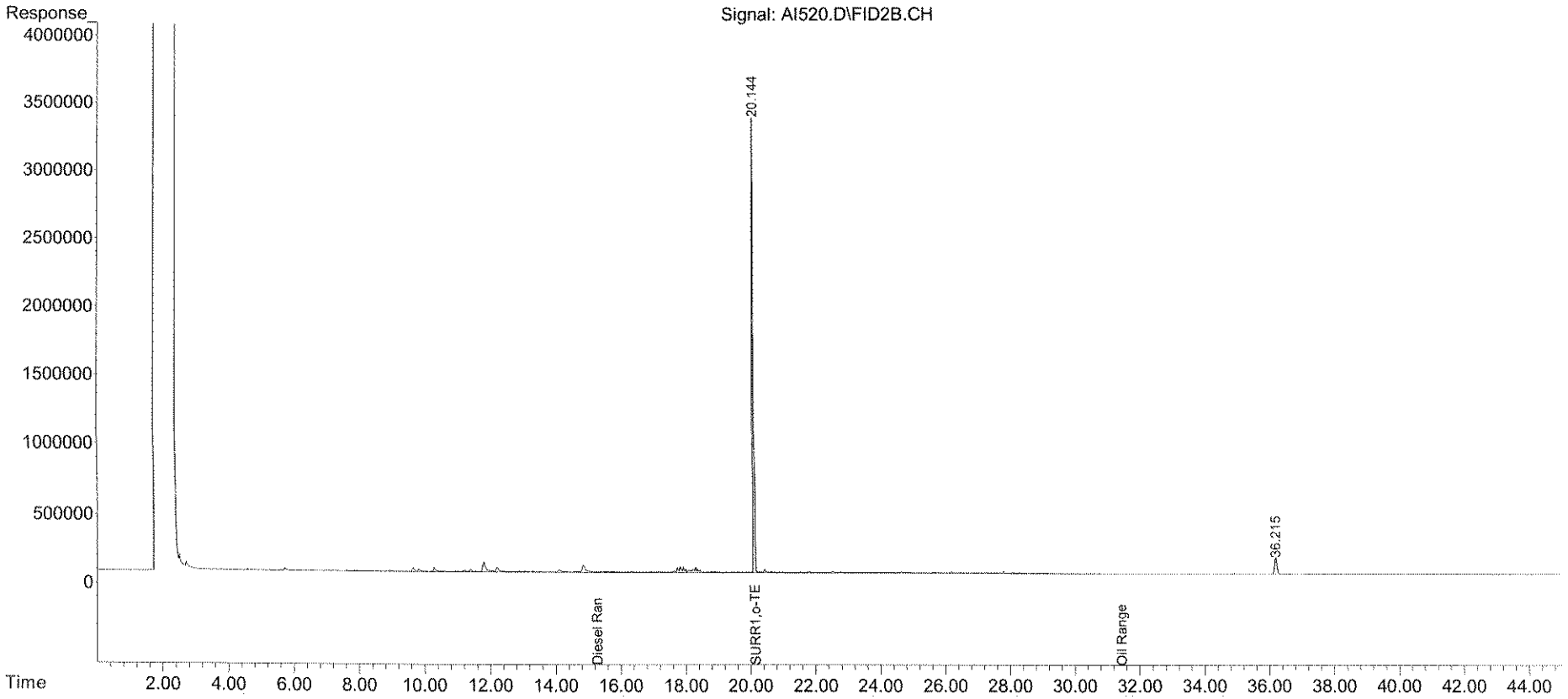
BA 9/15

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI520.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 5:02 pm
Operator : b.allgeier
Sample : RQ0908043-01
Misc : 09/02/09 1060 NORTHGATE 8015B
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:39 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



19C08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0908132-01	**Basis:**	NA

SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	75	U	100	75	1	9/ 2/09	9/14/09 10:13	95174	170335	
C28 - C40 ORO	75	U	100	75	1	9/ 2/09	9/14/09 10:13	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	65	51-117	9/14/09 10:13		

Comments:

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI512.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 10:13 am
Operator : b.allgeier
Sample : RQ0908131-01 / RQ908132-01
Misc : 09/02/09 1000 MB 8015B
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:14 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S SURR1,o-TERPHENYL	20.137	65996641	64.58 mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 64.58%	
Target Compounds			
2) HC Diesel Range Organics	~~15.265~~	~~41548937~~	~~44.01 mg/l~~
3) HC Oil Range Organics	~~31.442~~	~~12275350~~	~~17.95 mg/l~~

(f)=RT Delta > 1/2 Window (m)=manual int.

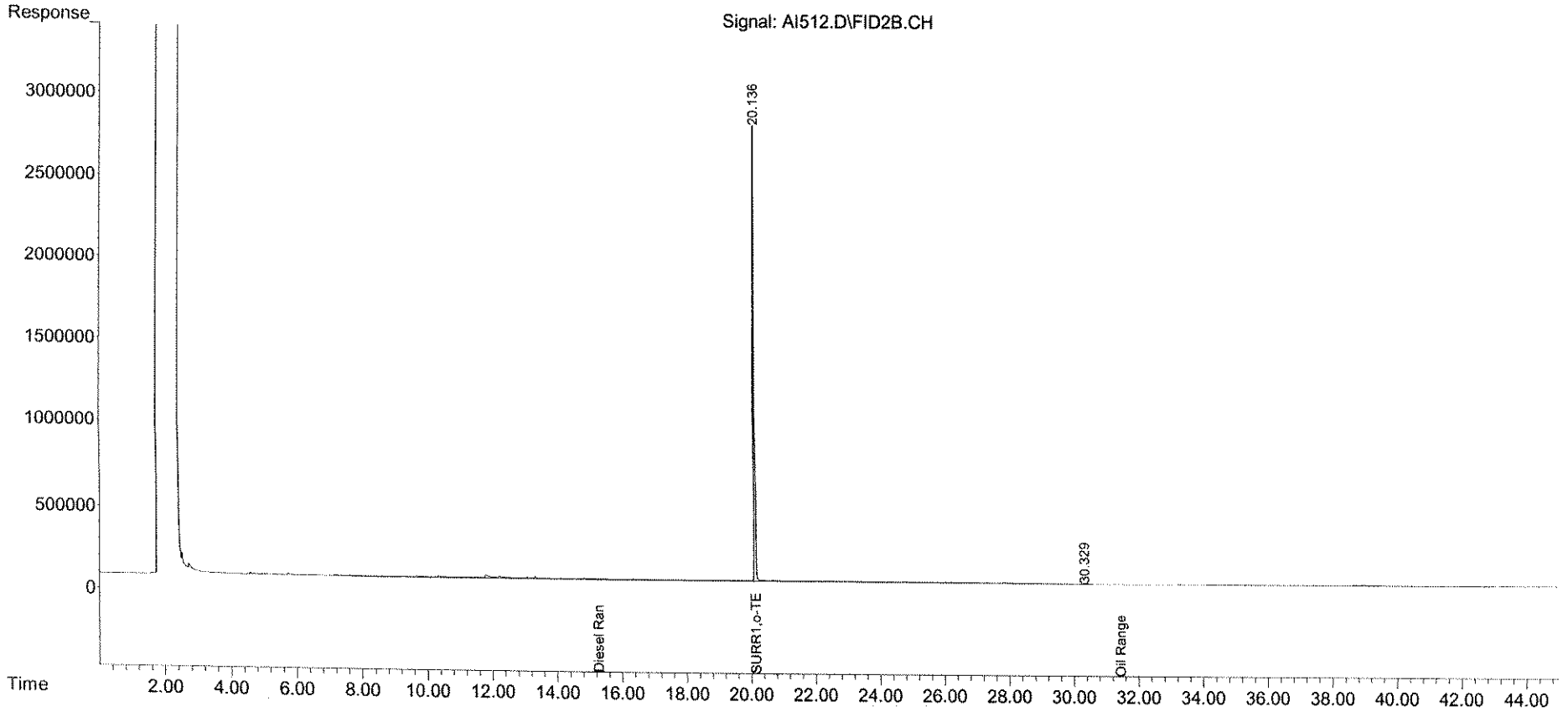
BA
9/15

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI512.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 10:13 am
Operator : b.allgeier
Sample : RQ0908131-01
Misc : 09/02/09 1000 MB 8015B
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:14 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: RQ0908132-02

Units: µg/L
Basis: NA

SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	**314**		100	75	1	9/ 2/09	9/14/09 11:04	95174	170335	
C28 - C40 ORO	75	U	100	75	1	9/ 2/09	9/14/09 11:04	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	75	51-117	9/14/09 11:04		

Comments:

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI513.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:04 am
Operator : b.allgeier
Sample : RQ0908131-02 / RQ0908132-02
Misc : 09/02/09 1000 LCS 8015B
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:26:31 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.138	76910784	75.25	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 75.25%		
Target Compounds				
2) HC Diesel Range Organics	15.265	296195441	313.74	mg/l M
3) HC Oil Range Organics	0.000	0	N.D.	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

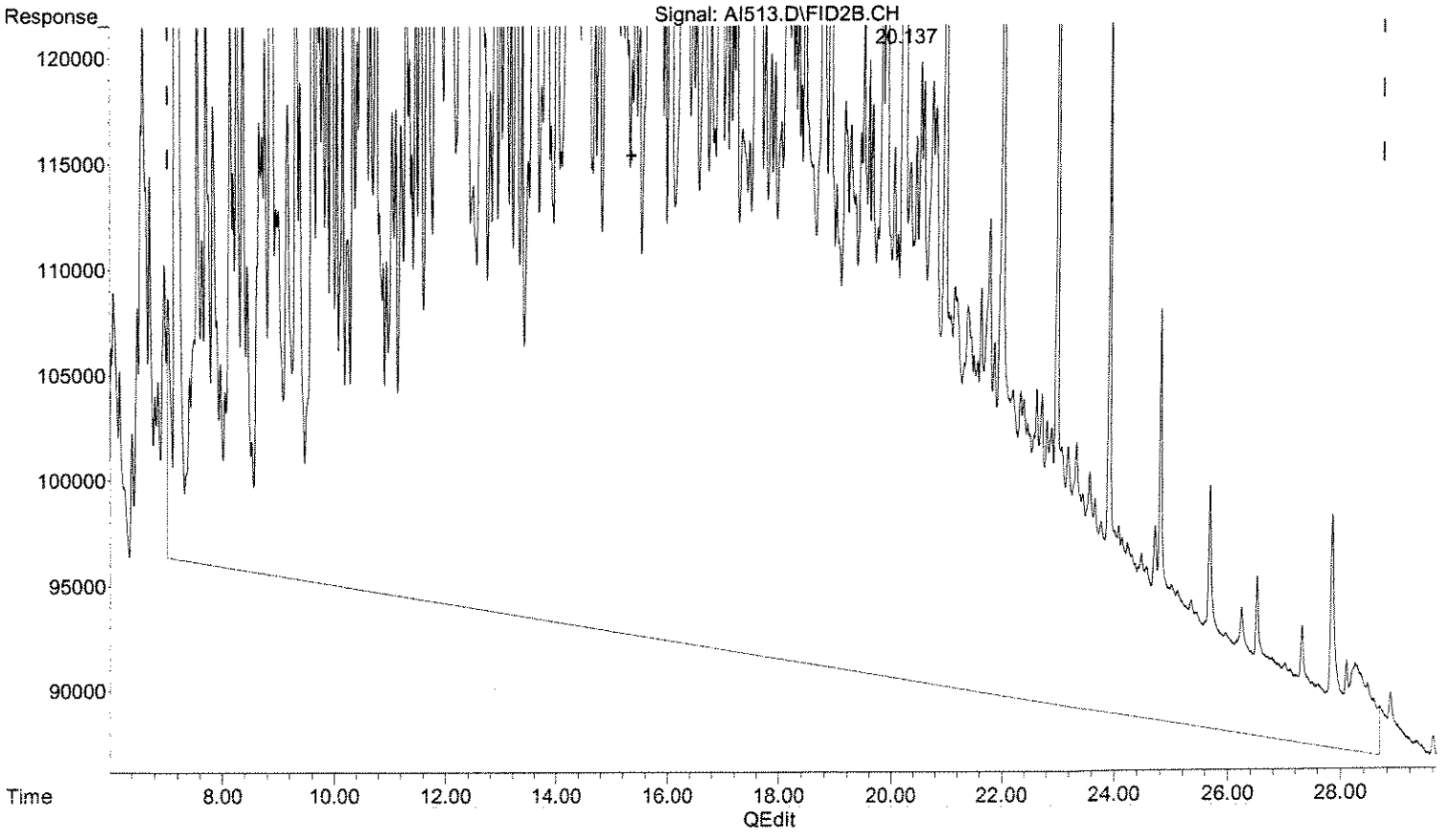
BA
9/15

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI513.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:04 am
Operator : b.allgeier
Sample : RQ0908131-02
Misc : 09/02/09 1000 LCS 8015B
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:18 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 326.691mg/l m

response 308426633

B
(BAD RUN)

(+) = Expected Retention Time

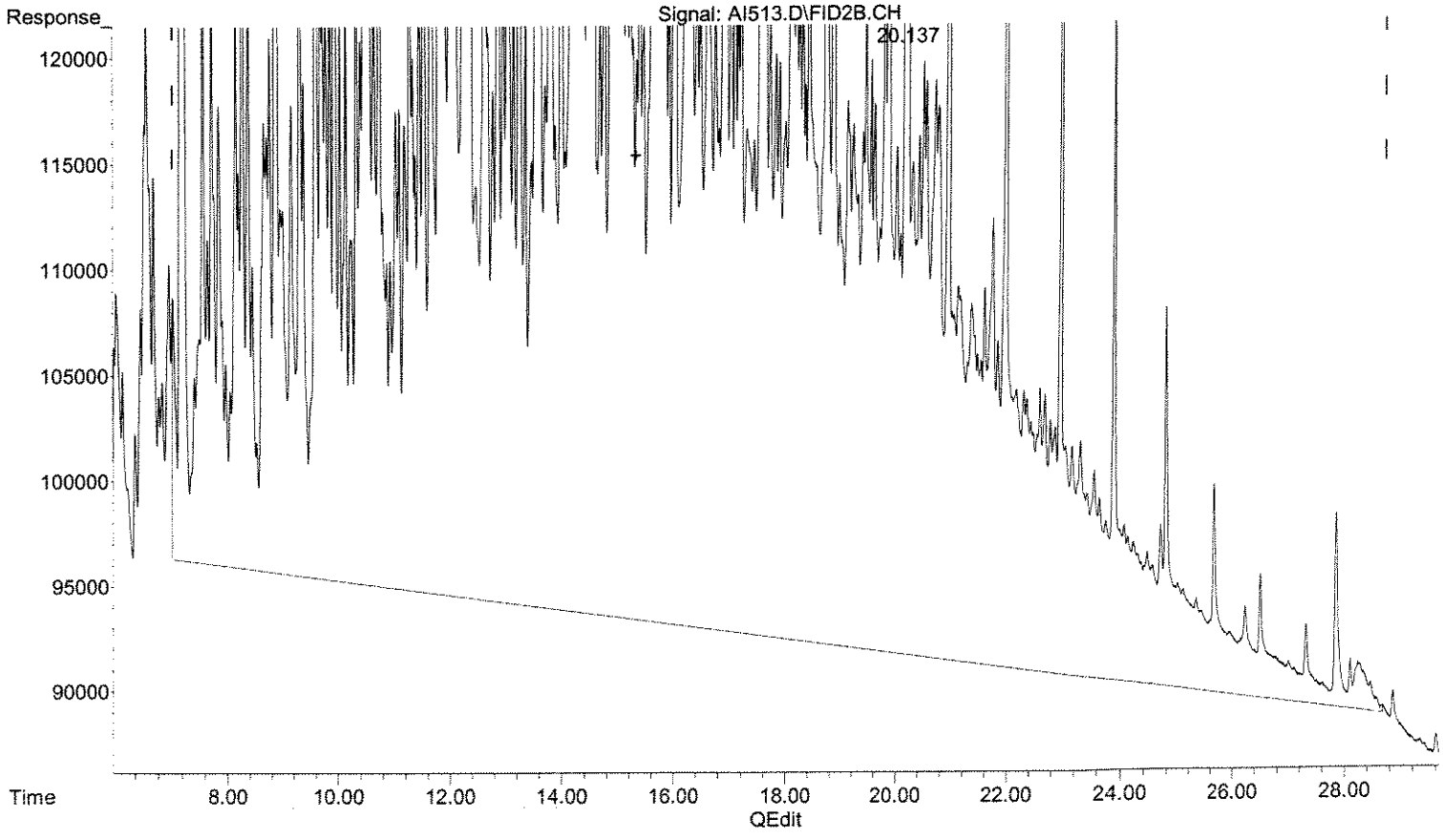
00393

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI513.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:04 am
Operator : b.allgeier
Sample : RQ0908131-02
Misc : 09/02/09 1000 LCS 8015B
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:18 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 313.736mg/l m

response 296195441

A
BA 9/15

MW 9/15

(+) = Expected Retention Time

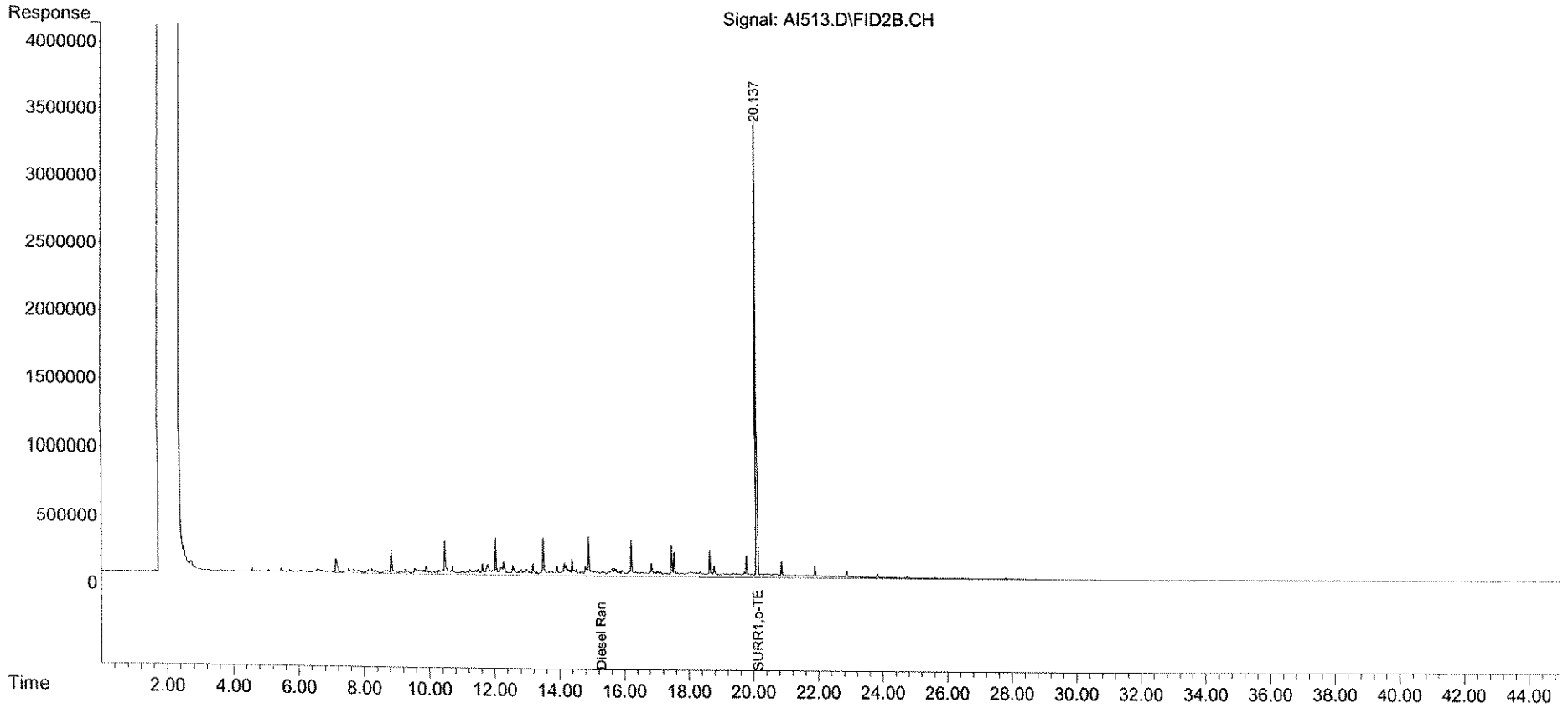
00394

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI513.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:04 am
Operator : b.allgeier
Sample : RQ0908131-02
Misc : 09/02/09 1000 LCS 8015B
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:26:31 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI513.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:04 am
Operator : b.allgeier
Sample : RQ0908131-02
Misc : 09/02/09 1000 LCS 8015B
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:18 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.138	76910784	75.25	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 75.25%		
Target Compounds				
2) HC Diesel Range Organics	15.265	308426633	326.69	mg/l
3) HC Oil Range Organics	31.442	12393531	18.12	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

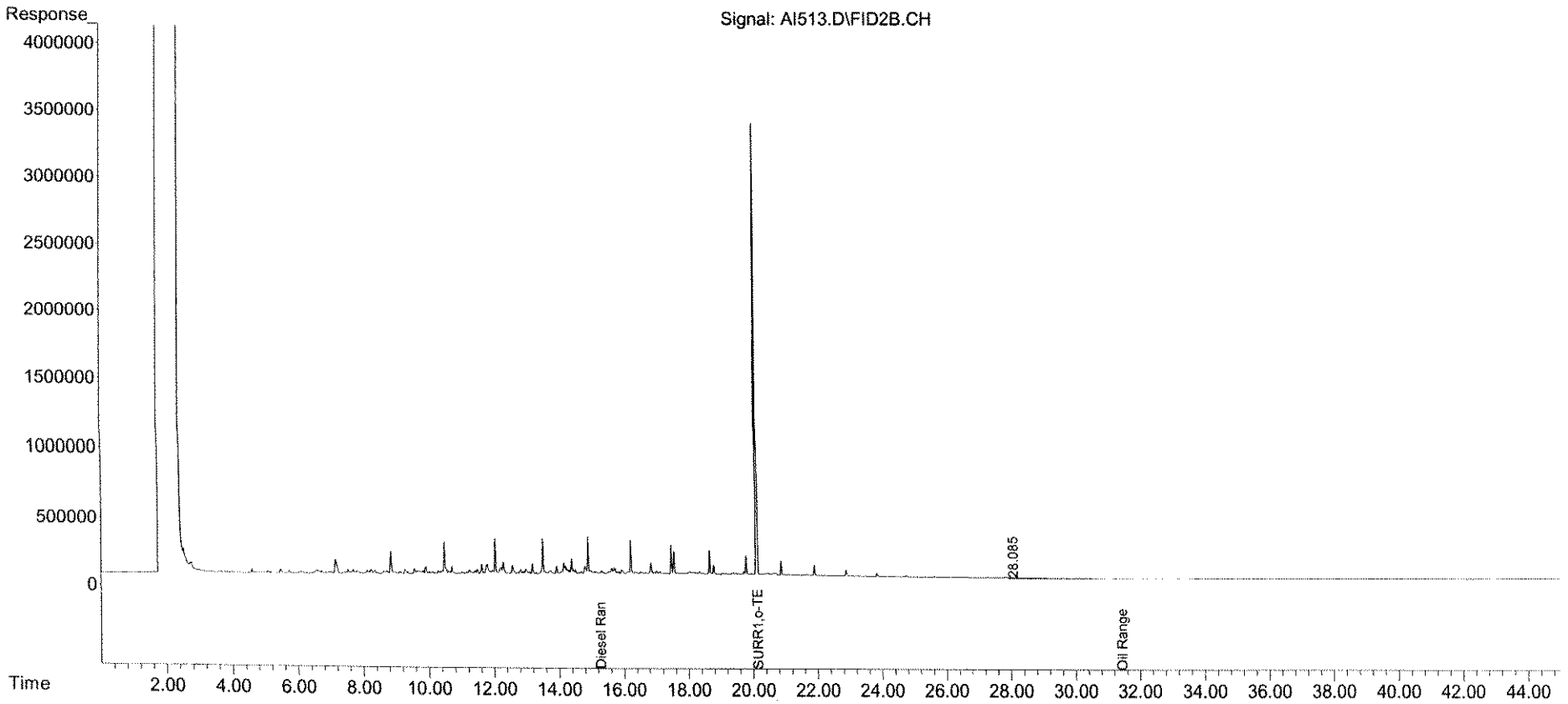
ORIGINAL

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI513.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:04 am
Operator : b.allgeier
Sample : RQ0908131-02
Misc : 09/02/09 1000 LCS 8015B
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:18 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Client:	Northgate Environmental	**Service Request:**	R0904817
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample Dup	**Units:**	µg/L
Lab Code:	RQ0908132-03	**Basis:**	NA

SPLP Diesel and Residual Range Organics by GC

Analytical Method: 8015B
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Diesel Range Organics (DRO)	**397**		100	75	1	9/ 2/09	9/14/09 11:55	95174	170335	
C28 - C40 ORO	75	U	100	75	1	9/ 2/09	9/14/09 11:55	95174	170335	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
o-Terphenyl	98	51-117	9/14/09 11:55		

Comments:

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI514.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:55 am
Operator : b.allgeier
Sample : RQ0908131-03 / RQ0908132-03
Misc : 09/02/09 1000 LCSD 8015B
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:27:55 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.144	99765220	97.62	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 97.62%		
Target Compounds				
2) HC Diesel Range Organics	15.265	374913682	397.12	mg/l m
3) HC Oil Range Organics	0.000	0	N.D.	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

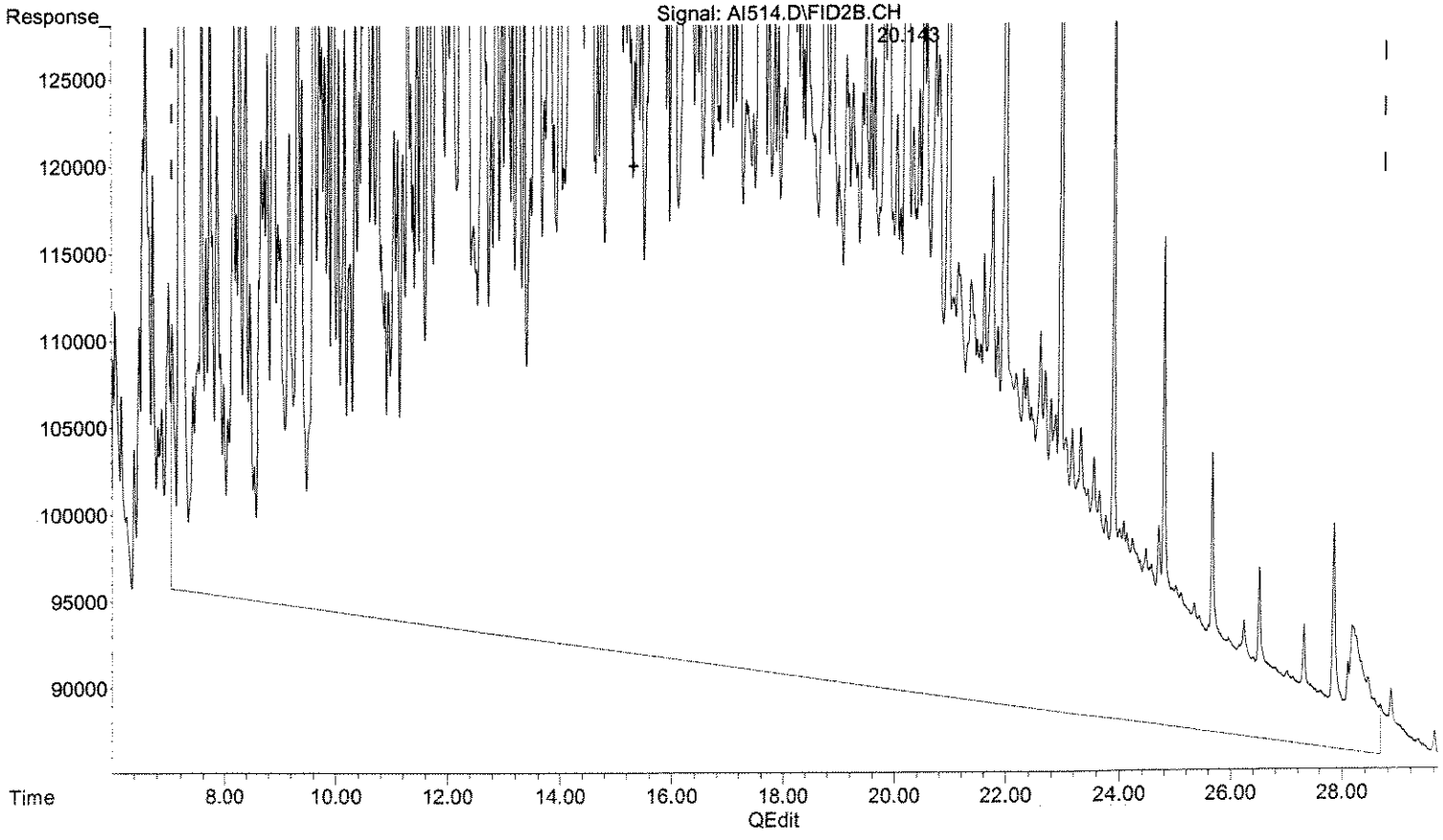
BA
9/15

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI514.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:55 am
Operator : b.allgeier
Sample : RQ0908131-03
Misc : 09/02/09 1000 LCSD 8015B
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:21 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 412.821mg/l m

response 389740795

B
(BAD INT.)

(+) = Expected Retention Time

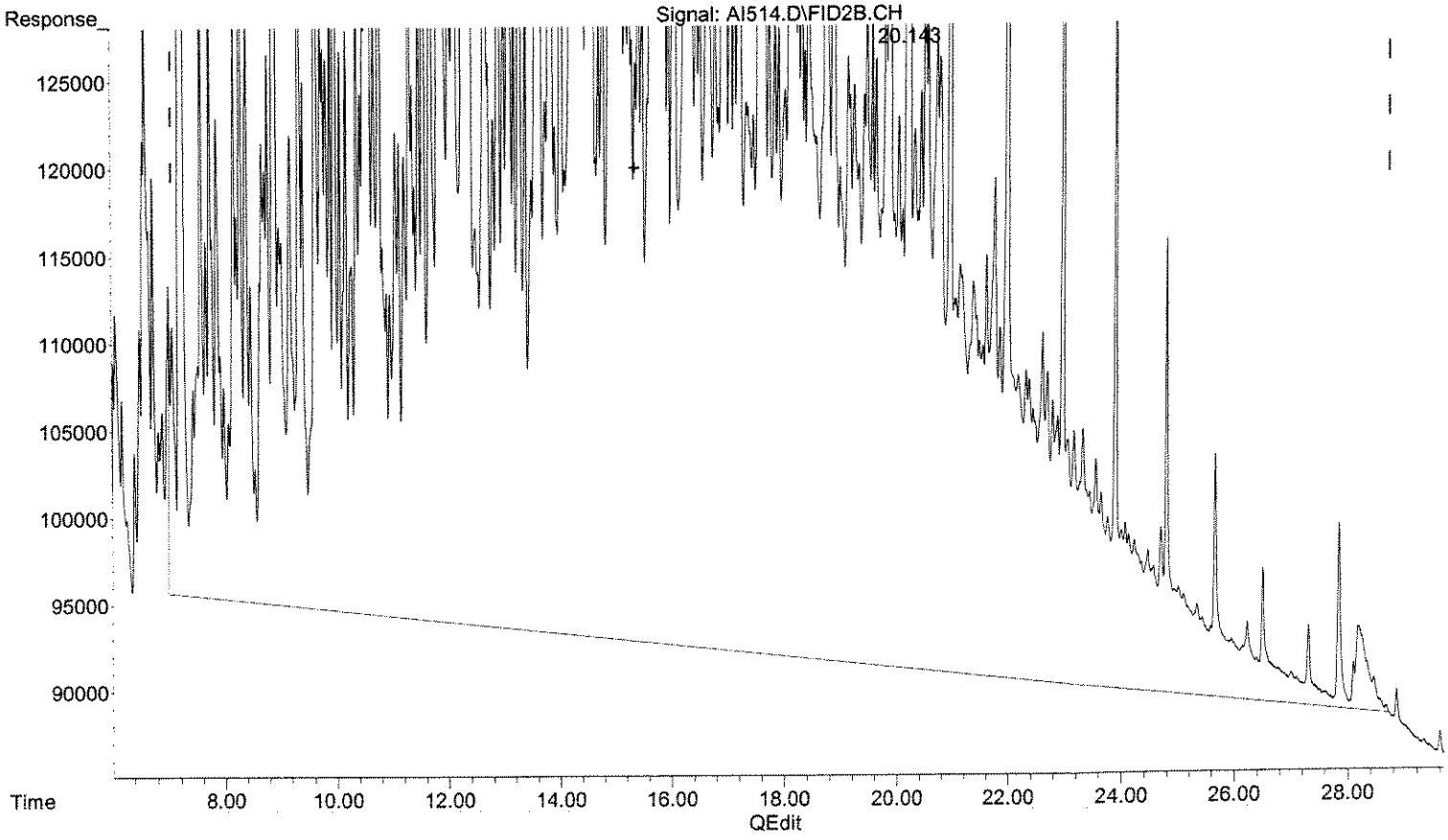
00400

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI514.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:55 am
Operator : b.allgeier
Sample : RQ0908131-03
Misc : 09/02/09 1000 LCSD 8015B
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:21 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



(2) Diesel Range Organics (HC)

15.265min 397.116mg/l m

response 374913682

A
BA 9/15

MW 9/14

(+) = Expected Retention Time

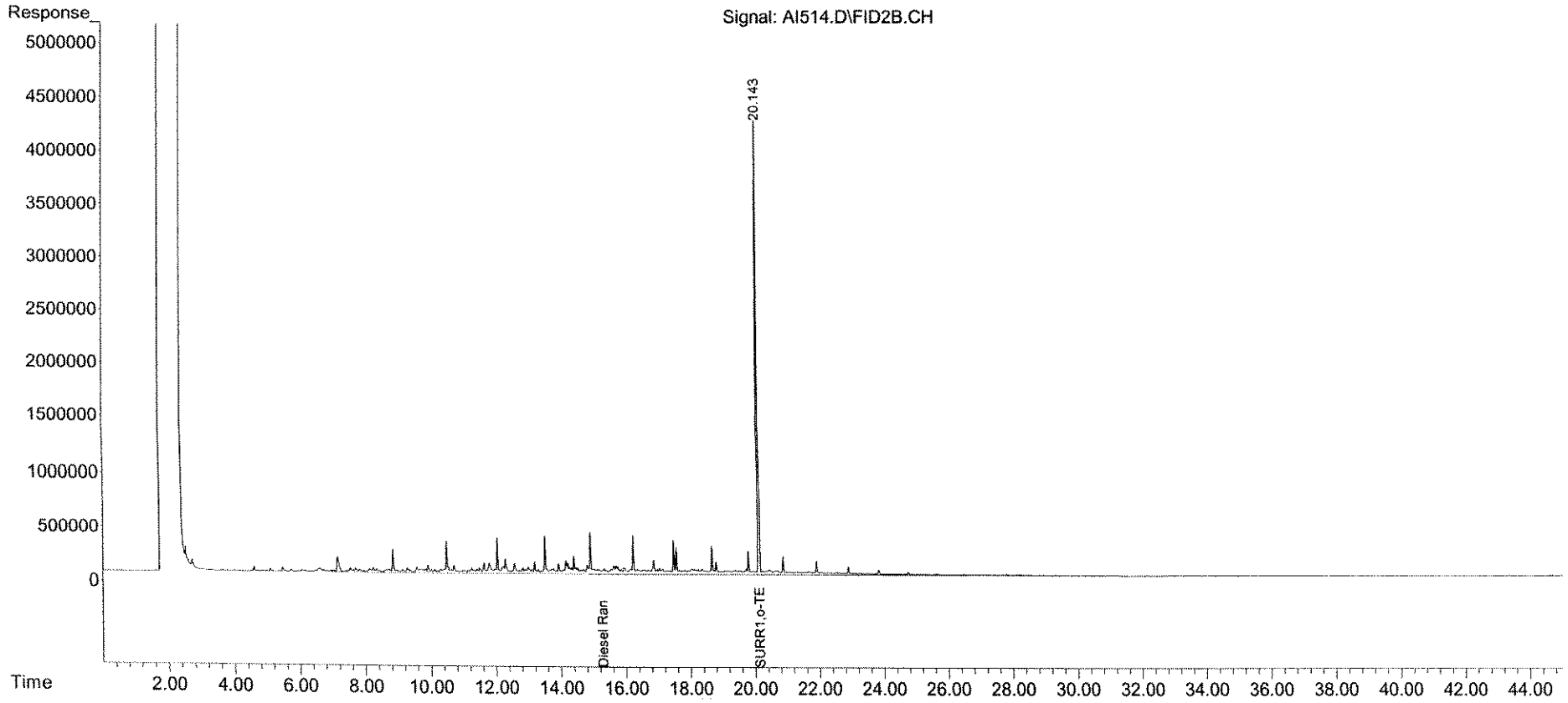
00401

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI514.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:55 am
Operator : b.allgeier
Sample : RQ0908131-03
Misc : 09/02/09 1000 LCSD 8015B
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:27:55 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI514.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:55 am
Operator : b.allgeier
Sample : RQ0908131-03
Misc : 09/02/09 1000 LCSD 8015B
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:21 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S SURR1,o-TERPHENYL	20.144	99765220	97.62	mg/l
Spiked Amount 100.000	Range 56 - 128	Recovery = 97.62%		
Target Compounds				
2) HC Diesel Range Organics	15.265	389740795	412.82	mg/l
3) HC Oil Range Organics	31.442	13620953	19.91	mg/l

(f)=RT Delta > 1/2 Window (m)=manual int.

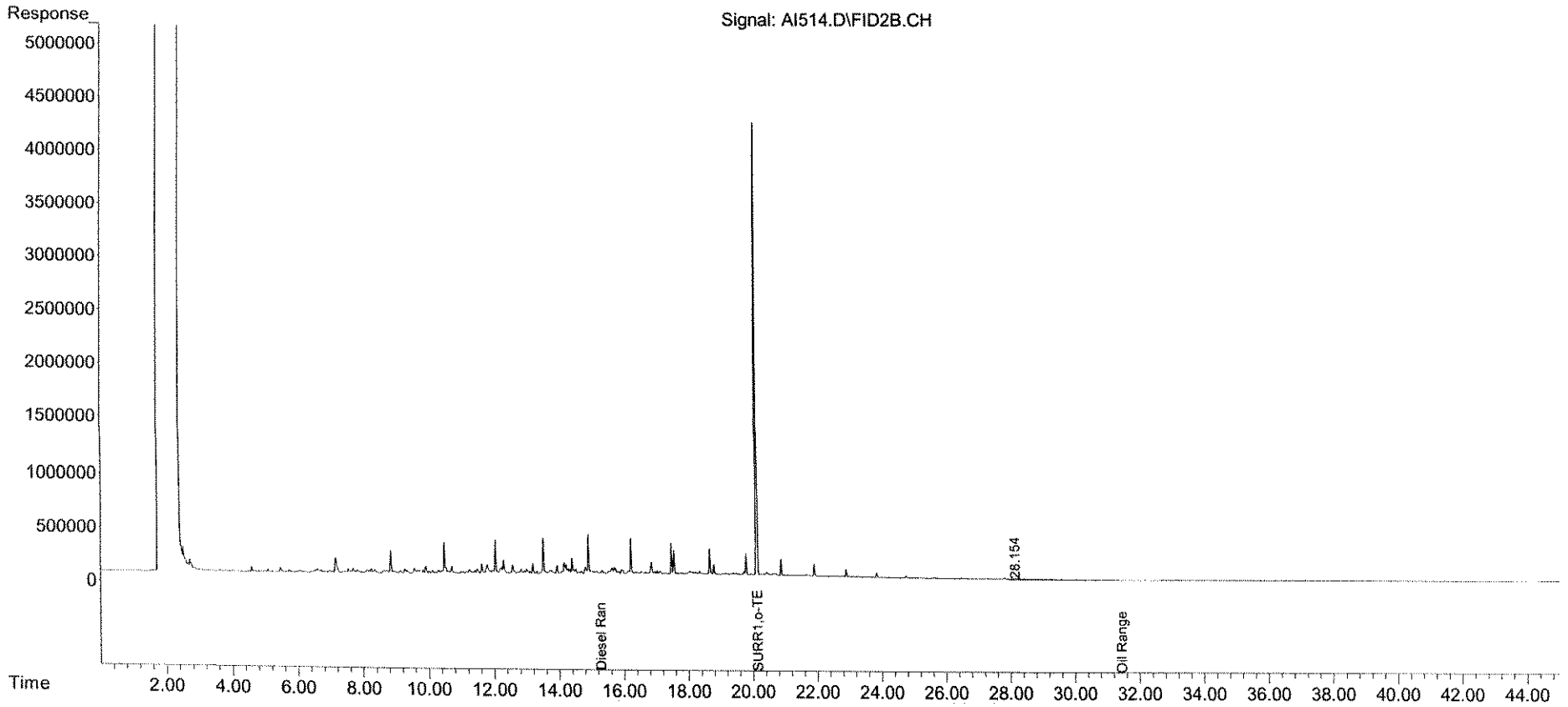
ORIGINAL

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890I\DATA\091409\
Data File : AI514.D
Signal(s) : FID2B.CH
Acq On : 14 Sep 2009 11:55 am
Operator : b.allgeier
Sample : RQ0908131-03
Misc : 09/02/09 1000 LCSD 8015B
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e
Quant Time: Sep 15 08:14:21 2009
Quant Method : J:\ACQUDATA\6890I\methods\ORO0908.M
Quant Title : EPA Method 8015B Deisel and Oil Range Organics
QLast Update : Tue Sep 15 08:09:16 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal Phase : Phenomenex ZB-5
Signal Info : 30m x .32mm x 0.50um



Preparation Information Benchsheet

Prep Run#: 95174
Team: Semivoa GC/DMURPHY

Prep WorkFlow: OrgExtLP
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 9/2/09 01:15 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908132-01	MB		1000mL	8015B/DRO RRO SPLP	6	x		1.00mL	clear-colorless	1.0000 mL/11551	
2	RQ0908132-02	LCS		1000mL	8015B/DRO RRO SPLP	6	x		1.00mL	clear-colorless	1.0000 mL/11208; 1.0000 mL/11551	
3	RQ0908132-03	DLCS		1000mL	8015B/DRO RRO SPLP	6	x		1.00mL	clear-colorless	1.0000 mL/11208; 1.0000 mL/11551	
4	R0904817-001	SA64-10BSPLP2	.06	1060mL	8015B/DRO RRO SPLP	7	x		1.00mL	yellow-cloudy	1.0000 mL/11551	
5	R0904817-002	SA64-10BSPLP3	.10	1060mL	8015B/DRO RRO SPLP	7	x		1.00mL	yellow-cloudy	1.0000 mL/11551	
6	RQ0908042-01	MB	.02	1060mL	8015B/DRO RRO SPLP	5	x		1.00mL	clear-colorless	1.0000 mL/11551	
7	RQ0908043-01	MB	.02	1060mL	8015B/DRO RRO SPLP	5	x		1.00mL	clear-colorless	1.0000 mL/11551	

Spiking Solutions

Name: Fuel Oil #2 Water Spike 500 ug/mL Inventory ID 11208 Logbook Ref: 0-618-132-B Expires On: 12/26/2009

Name: o-Terphenyl Water Surrogate 100 ug/mL Inventory ID 11551 Logbook Ref: 0-618-143-B Expires On: 02/13/2010

Preparation Materials

Sulfuric Acid, 50% H2SO4 (11821)

Dichloromethane (Methylene Chloride) 99.9% MeCl2 0-344-43-P (11678)

Prepared Sodium Sulfate Na2SO4 (11959)

Preparation Steps

Step:	Extraction	Step:	Concentration	Step:	Final Volume
Started:	9/2/09 13:15	Started:	9/3/09 09:00	Started:	9/3/09 12:55
Finished:	9/2/09 15:30	Finished:	9/3/09 12:00	Finished:	9/3/09 12:55
By:	DMURPHY	By:	LDESSENA	By:	LDESSENA

Comments:

Reviewed By: Meghan Riddle Date: 9/3/09 Spike Witness: LDESSENA LDS Date: 9/3/09

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined
Yes No

Analysis: 8015B. DRO Analyst: BA Run Method: DRO-ORO

Date: 9/14/09 Instr. 6890I Quant Method: OR000908

LIMS Run#:

Pos.	Sample	Diln.	Diln. Prep.	Client	File#	OK?	Comments
1	BLK				A1510	–	
2	CCV 10 (MH)				511	YC	
3	RO090813-01/8132-01(MB)	1.0	1000		512	Y	
4	813-02/8132-02(LCS)		↓		513	Y	
5	813-03/8132-03(LCSD)		↓		514	Y	
6	RO904894-015		1060	[redacted]	515	Y	
7	4948-006		↓	↓	516	Y	
8	4817-001		↓		517	Y	
9	↓ -002		↓		518	Y	
10	RO908042-01(EQ)		↓		519	Y	
11	8289-01(EQ)		↓	↓	520	Y	
12	8289-01(MB)	↓	1000		521	Y	
13	CCV 11 (MH)				522	YC	ORO ↑
13	CCV 11B				523	–	NOT USING ORO ↑
14	RO908289-02(LCS)	1.0	1000		524	Y	
15	↓ -03(LCSD)	↓	↓		525	Y	
16	RO904948-009		1060	[redacted]	526	Y	
17	5021-015		↓	↓	527	N	RPT ORO HIT
18	5072-022		↓		528	Y	
19	RO908322-01(MB)		2.5		529	Y	
20	-02(LCS)		↓		530	Y	
21	↓ -03(LCSD)		↓		531	Y	
22	RO904948-017		↓	[redacted]	532	Y	
23	RO908322-04(MS)	↓	↓	↓	533	Y	
24	CCV 12				534	YC	ORO ↑
24	CCV 12B				535	–	NOT USING ORO ↑
25	RO908322-05(MSD)	1.0	2.5	[redacted]	536		
26	RO905021-001		↓	↓	537		
27	-002		↓		538		
28	-003		↓		539		
29	-004		↓		540		
30	-005		↓		541		
31	↓ -006		↓		542		
32	RO908322-06(MS)		↓		543		
33	↓ -07(MSD)		↓		544		
34	RO905021-007	↓	↓	↓	545		
35	CCV 13				546		
35	CCV 13B				547		

All samples = _____mL + _____uL Combined IS/Surr.;

Primary :_____ exp: Secondary :_____ exp:

Primary:_____ exp: Secondary :_____ exp:

Analysis: 8015B DRO Analyst: BA Run Method: DRO-ORO.m

Date: 9/8/09 Instr. 6890I Quant Method: OR00908.m

LIMS Run#:

Pos.	Sample	Diln.	Diln. Prep.	Client	File#	OK?	Comments
1	BLK				AI400	–	
1	INST BLK				401	Y	
2	LOW				402	Y	
3	MED LOW				403	Y	
4	MED				404	Y	
5	MED HIGH				405	Y	
6	HIGH				406	Y	
7	ICV				407	N	WRONG STD
8	CCV				408		
9	CCV				409		
10	R0904769-017				410		
7	4901-001	100			411		
8	ICV				412	Y	
9	CCVI (ML)				416		
10	R0904769-017	1.0	2.5	[redacted]	417		
11	4901-001	100	1060		418		
	R0908032-03				419		

All samples = _____mL + _____uL Combined IS/Surr.;

Primary :_____ exp: Secondary :_____ exp:

Primary:_____ exp: Secondary :_____ exp:

GENERAL CHEMISTRY DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP2
Lab Code: R0904817-001

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**80.1**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.081**		mg/L	0.050	0.007	1	NA	9/4/09 13:23
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**16.5**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 15:56
Carbon, Total Organic	9060	**0.4**	BJ	mg/L	1.0	0.1	1	NA	9/15/09 17:40
Carbonate Alkalinity as CaCO3	SM 2320 B	**63.6**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**4.59**		mg/L	0.20	0.05	1	NA	9/1/09 15:56
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 13:51
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 14:01
Conductivity	120.1	**420**		µMHOS/cm	0.050		1	NA	9/1/09 18:05
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**1.15**	B	mg/L	0.050	0.004	1	NA	9/1/09 15:56
Nitrite as Nitrogen	353.2M	**4.60**		mg/L	0.050	0.035	5	NA	9/1/09 15:15
pH	9040B Modified	**9.88**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.078**	B	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:40
Solids, Total Dissolved (TDS)	SM 2540 C	**207**		mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	**1.1**		mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	**12.7**		mg/L	0.40	0.09	2	NA	9/1/09 21:05
Surfactants	SM 5540 C	**0.017**	J	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: 8/24/09 0834
Date Received: 8/25/09
Pre-Prep Date: 8/31/09

Sample Name: SA64-10BSPLP3
Lab Code: R0904817-002

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**80.4**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.084**		mg/L	0.050	0.007	1	NA	9/4/09 13:27
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**16.8**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 17:01
Carbon, Total Organic	9060	**0.5**	BJ	mg/L	1.0	0.1	1	NA	9/15/09 18:14
Carbonate Alkalinity as CaCO3	SM 2320 B	**63.6**		mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**4.46**		mg/L	0.20	0.05	1	NA	9/1/09 17:01
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 15:56
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 16:06
Conductivity	120.1	**389**		µMHOS/cm	0.050		1	NA	9/1/09 18:05
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**1.05**		mg/L	0.050	0.004	1	NA	9/1/09 17:01
Nitrite as Nitrogen	353.2M	**4.41**		mg/L	0.050	0.035	5	NA	9/1/09 15:18
pH	9040B Modified	**9.93**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.046**	BJ	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:42
Solids, Total Dissolved (TDS)	SM 2540 C	**202**		mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	**13.2**		mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	**12.5**		mg/L	0.40	0.09	2	NA	9/1/09 21:54
Surfactants	SM 5540 C	**0.011**	J	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: R0904817-MB1

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.007**	J	mg/L	0.050	0.007	1	NA	9/4/09 13:22
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 20:00
Carbon, Total Organic	9060	**0.2**	J	mg/L	1.0	0.1	1	NA	9/15/09 16:31
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**0.16**	J	mg/L	0.20	0.05	1	NA	9/1/09 20:00
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 13:30
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 13:40
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**0.146**		mg/L	0.050	0.004	1	NA	9/1/09 20:00
Nitrite as Nitrogen	353.2M	0.007	U	mg/L	0.010	0.007	1	NA	9/1/09 15:15
pH	9040B Modified	**4.98**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.012**	J	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:40
Solids, Total Dissolved (TDS)	SM 2540 C	6	U	mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	1.0	U	mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	**0.86**		mg/L	0.20	0.05	1	NA	9/1/09 20:00
Surfactants	SM 5540 C	0.005	U	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Collected: NA
Date Received: NA
Pre-Prep Date: 8/31/09

Sample Name: Method Blank
Lab Code: R0904817-MB2

Basis: NA

Synthetic Precipitation Leachate Procedure (SPLP)
General Chemistry Parameters

Pre-Prep Method: EPA 1312

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity, Total as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Ammonia as Nitrogen	350.1M	**0.007**	J	mg/L	0.050	0.007	1	NA	9/4/09 13:26
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**1.0**	J	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	9/1/09 16:44
Carbon, Total Organic	9060	**0.2**	J	mg/L	1.0	0.1	1	NA	9/15/09 17:05
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	9/11/09 10:50
Chloride	9056	**0.16**	J	mg/L	0.20	0.05	1	NA	9/1/09 16:44
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 14:53
Chromium, Hexavalent	7199	0.004	U	mg/L	0.010	0.004	1	NA	9/1/09 15:04
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	9/ 3/09	9/3/09 17:53
Nitrate as Nitrogen	9056 Modified	**0.089**		mg/L	0.050	0.004	1	NA	9/1/09 16:44
Nitrite as Nitrogen	353.2M	0.007	U	mg/L	0.010	0.007	1	NA	9/1/09 15:18
pH	9040B Modified	**6.82**		pH Units	0.00		1	NA	9/1/09 12:30
Phosphorus	365.1 Modified	**0.011**	J	mg/L	0.050	0.005	1	9/ 8/09	9/9/09 10:41
Solids, Total Dissolved (TDS)	SM 2540 C	6	U	mg/L	10	6	1	NA	9/4/09 10:50
Solids, Total Suspended (TSS)	SM 2540 D	1.0	U	mg/L	1.0		1	NA	9/4/09 11:40
Sulfate	9056 Modified	0.05	U	mg/L	0.20	0.05	1	NA	9/1/09 16:44
Surfactants	SM 5540 C	0.005	U	mg/L	0.020	0.005	1	NA	9/2/09 08:47

Comments:

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page

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/ 1/09 - 9/15/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0904817-LCS1 Result	Expected	% Rec	% Rec Limits
Alkalinity, Total as CaCO3	SM 2320 B	**18.8**	20.0	94	90 - 108
Ammonia as Nitrogen	350.1M	**0.502**	0.500	100	90 - 110
Bromide	9056	**1.01**	1.00	101	90 - 110
Carbon, Total Organic	9060	**9.20**	10.0	92	86 - 117
Chloride	9056	**1.80**	2.00	90	90 - 110
Chromium, Hexavalent	7199	**0.189**	0.200	94	92 - 110
Chromium, Hexavalent	7199	**0.196**	0.200	98	92 - 110
Cyanide, Total	9012A	**0.0900**	0.100	90	85 - 115
Nitrite as Nitrogen	353.2M	**0.240**	0.250	96	90 - 110
Phosphorus	365.1 Modified	**0.797**	0.800	100	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C	**879**	913	96	80 - 120
Solids, Total Suspended (TSS)	SM 2540 D	**216**	214	101	80 - 120
Sulfate	9056 Modified	**2.03**	2.00	101	90 - 110
Surfactants	SM 5540 C	**0.0198**	0.020	99	64 - 142
Nitrate as Nitrogen	9056 Modified	**0.978**	1.00	98	90 - 110

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Soil

Service Request: R0904817
Date Analyzed: 9/ 1/09 - 9/15/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0904817-LCS2 Result	Expected	% Rec		% Rec Limits
Carbon, Total Organic	9060	**9.20**	10.0	92		86 - 117
Chromium, Hexavalent	7199	**0.183**	0.200	91	*	92 - 110
Chromium, Hexavalent	7199	**0.189**	0.200	95		92 - 110
Cyanide, Total	9012A	**0.369**	0.400	92		85 - 115
Surfactants	SM 5540 C	**0.330**	0.350	94		64 - 142

Comments:

Analytical Results Summary

4 runs

Instrument Name: R-Buret-01 **Analyst:** BBOWE **Analysis Lot:** 170084 **Method/Testcode:** SM 2320 B/Alk Tot SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908042-01	Alkalinity, Total as CaCO3	MB		Soil	1.00 mg/L	100 mL	1.0 mg/L J	1	2.0			9/11/09 10:50	N	IV
RQ0908042-01	Bicarbonate Alkalinity as CaCO3	MB		Soil	1.00 mg/L	100 mL	1 mg/L J	1	2.0			9/11/09 10:50	N	IV
RQ0908042-01	Carbonate Alkalinity as CaCO3	MB		Soil	0.00 mg/L	100 mL	2.0 mg/L U	1	2.0			9/11/09 10:50	N	IV
RQ0908555-01	Alkalinity, Total as CaCO3	LCS		Soil	18.80 mg/L	100 mL	18.8 mg/L	1	2.0	94		9/11/09 10:50	N	IV
R0904817-001	Alkalinity, Total as CaCO3	N/A		Soil	80.10 mg/L	100 mL	80.1 mg/L	1	2.0			9/11/09 10:50	N	IV
R0904817-001	Bicarbonate Alkalinity as CaCO3	N/A		Soil	16.50 mg/L	100 mL	16.5 mg/L	1	2.0			9/11/09 10:50	N	IV
R0904817-001	Carbonate Alkalinity as CaCO3	N/A		Soil	63.60 mg/L	100 mL	~~0.6 mg/L J~~ 63.6 CK 10/15/09	1	2.0			9/11/09 10:50	N	IV
RQ0908043-01	Alkalinity, Total as CaCO3	MB		Soil	1.00 mg/L	100 mL	1.0 mg/L J	1	2.0			9/11/09 10:50	N	IV
RQ0908043-01	Bicarbonate Alkalinity as CaCO3	MB		Soil	1.00 mg/L	100 mL	1.0 mg/L J	1	2.0			9/11/09 10:50:00	N	IV
RQ0908043-01	Carbonate Alkalinity as CaCO3	MB		Soil	0.00 mg/L	100 mL	2.0 mg/L U	1	2.0			9/11/09 10:50:00	N	IV
R0904817-002	Alkalinity, Total as CaCO3	N/A		Soil	80.40 mg/L	50 mL	80.4 mg/L	1	2.0			9/11/09 10:50	N	IV
R0904817-002	Bicarbonate Alkalinity as CaCO3	N/A		Soil	16.80 mg/L	50 mL	16.8 mg/L	1	2.0			9/11/09 10:50	N	IV
R0904817-002	Carbonate Alkalinity as CaCO3	N/A		Soil	63.60 mg/L	50 mL	~~1.3 mg/L J~~ 63.6 CK 10/15/09	1	2.0			9/11/09 10:50	N	IV

R4817
R5115
R5114
340.2 m

Reviewed & Approved
By: CK
Date: 9/15/09

9/15/09

Printed 9/14/09 8:27

Preparation Information Benchsheet

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matt Cam Date: 9/1/09 1305

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: DBond Date: 9/1/09

Received By: Martha Cary Date: 9/1/09 1305

Extracts Examined
Yes No

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Alkalinity
Method: SM20 2320 B

Regular Level X
High Level ____

Analyst: B. Bowe
Pipette: HANS

Date: 9/11/09
Time: 10:50

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate oncentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

pH meter cal:

		Buffer Lot #:
4.0		WC92025A
7.0	7.04	WC92025B
10.0		WC92025C

Reagents:	Concentration		Log #	Date
H2SO4:	0.020	N	WC92061H	8/14/09
Reg Level Reference:	50	mg/L	WC92076B	
High Level Reference:	5000	mg/L		
LCS/MS Solution:	1000	mg/L	WC85297E	

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3 /L = $(A_{(mL\ acid\ used)} \times N_{(H2SO4)} \times 50{,}000)$ /mL sample

* Soils - 1g of sample diluted to 100mLs in DI
**HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.	Vol. Spk 1000 ppm (mL)	*Soil (X)	**HND Soil (X)
1	TV=50	ICV	25.0	9.80	0.00	1.25						50.0			
2		ICB	100.0	5.10	0.00	0.10	0.00	0.0	0.0	0.0	1.0	1.0			
3	TV=20	LCS	100.0	9.50	0.00	1.88						18.8	2.0		
4	MB	RQ0908042-01	100.0	5.10	0.00	0.10	0.00	0.0	0.0	0.0	1.0	1.0			
5		R0904817-001	100.0	9.95	0.00	8.01	3.18	31.8	0.0	63.6	16.5	80.1			
6	MB	RQ0908043-01	100.0	6.50	0.00	0.29	0.00	0.0	0.0	0.0	~~2.9~~ 1.0	~~2.9~~ 1.0	LL		
7		R0904817-002	50.0	9.97	0.00	4.02	1.59	31.8	0.0	63.6	16.8	80.4			
8	5096	R0905096-013	25.0	7.70	0.00	2.10						84.0			
9		R0905096-013 DUP	25.0	7.70	0.00	2.09						83.6			
10	TV=40	R0905096-013 SPK	25.0	8.70	0.00	2.99						119.6	1.0		
11		R0905096-016	25.0	7.60	0.00	5.83						233.2			
12		R0905096-019	30.0	7.80	0.00	2.31						77.0			
13		CCV	25.0	9.90	0.00	1.28						51.2			
14		CCB	100.0	5.50	0.00	0.15	0.00	0.0	0.0	0.0	1.5	1.5			
15		R0905096-022	20.0	8.30	0.00	3.40						170.0			
16		R0905096-025	20.0	7.50	0.00	4.54						227.0			
17	5115	R0905115-001	100.0	4.32	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0			
18		R0905135-007	20.0	8.20	0.00	5.50						275.0			
19		R0905135-008	20.0	7.60	0.00	2.65						132.5			
20	5147	R0905147-001	10.0	7.50	0.00	3.70						370.0			
21		R0905147-002	10.0	7.70	0.00	2.80						280.0			
22		R0905147-002 DUP	10.0	7.70	0.00	2.81						281.0			
23	TV=100	R0905147-002 SPK	10.0	8.70	0.00	3.68						368.0	1.0		
24	5114	R0905114-001	25.0	7.80	0.00	3.20						128.0			
25		CCV	25.0	9.90	0.00	1.28						51.2			
26		CCB	100.0	5.60	0.00	0.18	0.00	0.0	0.0	0.0	1.8	1.8			
27		LCS	100.0	9.30	0.00	1.88						18.8	2.0		
28		R0905114-002	25.0	8.10	0.00	2.83						113.2			
29		R0905114-003	100.0	5.10	0.00	0.15						1.5			
30		R0905114-004	100.0	6.80	0.00	2.23						22.3			
31		R0905114-005	100.0	7.00	0.00	3.00						30.0			
32		R0905114-006	100.0	7.30	0.00	2.89						28.9			
33		R0905114-007	100.0	7.30	0.00	3.00						30.0			
34		R0905114-008	100.0	6.60	0.00	1.25						~~12.5~~ 10.5	LL		
35		R0905114-009	25.0	8.05	0.00	3.45						138.0			
36		R0905114-010	25.0	8.50	0.00	4.99						199.6			
37		CCV	25.0	9.90	0.00	1.29						51.6			
38		CCB	100.0	5.60	0.00	0.18						1.8			

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Alkalinity
Method: SM20 2320 B

Regular Level X
High Level

Analyst: B. Bowe
Pipette: HANS

Date: 9/11/09
Time: 10:50

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate oncentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

pH meter cal:

		Buffer Lot #:
4.0		WC92025A
7.0	7.04	WC92025B
10.0		WC92025C

Reagents:	Concentration		Log #	Date
H2SO4:	0.020	N	WC92061H	8/14/09
Reg Level Reference:	50	mg/L	WC92076B	
High Level Reference:	5000	mg/L		
LCS/MS Solution:	1000	mg/L	WC85297E	

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3 /L = ($A_{(mL\ acid\ used)}$ x $N_{(H2SO4)}$ x 50,000) /mL sample

* Soils - 1g of sample diluted to 100mLs in DI
**HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.	Vol. Spk 1000 ppm (mL)	*Soil (X)	**HND Soil (X)
39		R0905114-011	25.0	8.40	0.00	2.48						99.2			
40		R0905114-011 DUP	25.0	8.40	0.00	2.48						99.2			
41	TV=40	R0905114-011 SPK	25.0	9.10	0.00	3.37						134.8	1.0		
42		R0905114-012	50.0	7.90	0.00	3.60						72.0			
43		R0905114-013	100.0	7.10	0.00	2.82						28.2			
44		R0905114-014	100.0	6.90	0.00	2.28						22.8			
45		R0905114-029	50.0	7.90	0.00	2.09						41.8			
46		R0905114-030	25.0	8.20	0.00	2.76						110.4			
47		R0905114-031	25.0	8.30	0.00	2.80						112.0			
48		R0905114-032	25.0	8.30	0.00	2.15						86.0			
49		CCV	25.0	9.90	0.00	1.29						51.6			
50		CCB	100.0	5.50	0.00	0.15						1.5			
51		LCS	100.0	9.50	0.00	1.90						19.0	2.0		
52		R0905114-033	100.0	4.35	0.00	0.00						0.0			
53		R0905114-034	25.0	8.10	0.00	3.59						143.6			
54		R0905114-034 DUP	25.0	8.10	0.00	3.59						143.6			
55	TV=40	R0905114-034 SPK	25.0	8.80	0.00	4.49						179.6	1.0		
56		R0905114-035	25.0	8.10	0.00	5.90						236.0			
57		R0905114-036	25.0	8.10	0.00	2.76						110.4			
58		R0905114-037	50.0	7.70	0.00	2.12						42.4			
59		CCV	25.0	9.90	0.00	1.28						51.2			
60		CCB	100.0	5.50	0.00	0.17						1.7			

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Alkalinity Low Level
Method: SM20 2320 B

Analyst: B. Bowe
Pipette:

Date: 9/11/09
Time: 10:50

pH meter cal:

		Buffer Lot #:
4.0		WC92025A
7.0	7.04	WC92025B
10.0		WC92025C

Reagent:

	Concentration	Log #	Date
H2SO4:	0.02 N	WC92061H	8/14/09

Alkalinity, mg CaCO3 /L = $\frac{(2B-C) \times N \times 50,000}{mL\ sample}$

where: B = mL standard acid used
C = total ml titrant to reach 0.3 pH units lower

*Soil - 1g of sample diluted to 100mls in DI **HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol.@pH 4.5		Vol.@pH -0.3		Total Alkalinity (mg/L)	*Soil (X)	**HND Soil (X)
						Vol.(B)	pH	Vol.(C)	pH			
1	MB	RQ0908043-01	100.0	6.50	0.00	0.29	4.46	0.48	4.15	1.00		
2	5114	R0905114-008	100.0	6.60	0.00	1.25	4.46	1.45	4.16	10.50		

Columbia Analytical Services
1 Mustard Street, Rochester, NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: B Bowe Date: 9/11/09

Analysis: ___Alkalinity, Regular/Low Level_____ Instrument: __Titration_____

Quality Control:

	Log Book #	Log Book Date	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Titrant:	WC92061H	8/14/2009				
b) I/CCV Preparation:	WC92076B	9/3/2009				50
c) LCS Preparation:	WC85297E	5/4/2009	2	1000	100	20
d) Matrix Spike Prep.:	WC85297E	5/4/2009	See Data Sheet			

Instrument log filled in? (Y) (N)

Packages:

Copy and attach Standards Preparation.

Comments:

p:\greg\forms\cover.alk

TITLE **PROJECT**

Continued from page

9/12/09 (A) DPD Indicator

In 800 ml vol flask dissolve 0.50g DPD (WC76675E) and 0.10g EDTA (WC12039F) and 4.0ml 1+3 H_2SO_4 (WC92015C) in UPDI. Exp 9/12/09 or when discolored

(B) 0.025N ~~$Na_2S_2O_3$~~ $Na_2S_2O_3$

RP 9/3/09 Dilute 5 mLs of ~~0.1N~~ 0.1N $Na_2S_2O_3$ (WC92020E) volumetrically with DI to 200mLs. Store at 4°C in amber jar. Exp. 2 week 9/17/09

8/13/09 NM (C) Color Reagent - TOTN

- same as WC92044C. Exp. 1month, 9/13/09.

8/13/09 NM (D) Buffer - TOTN

- same as WC92050G, Exp. 1year, 8/13/10.

8/13/09 RJ (E) Made Zinc acetate solution 2N using zinc-acetate (WC25155ED) in 1L volumetric flask 220g → 1L with DI for sulfide preservation. store at 4°C exp 9/13/10

8/13/09 KLR (F) Alkalinity Reference Solution: 50mg/L

Volumetrically add 10.0mL of Alkalinity Reference Stock: 5000mg/L (WC85296B) and dilute to 1L w/DI. Store@4°C in a plastic bottle. exp. 10/30/09

8/13/09 GN (G) 0.025N $Na_2S_2O_3$

Dilute 50 mL 0.1N $Na_2S_2O_3$ (WC92020E) volumetrically w/DI to 200mLs. Store at 4°C in amber jar. Exp 2weeks 8/27/09

8/14/09 BD (H) Received from VWR

(1) x 4L Sulfuric Acid, 0.02N, Cat # BDH3229-4, BDH Lot # 9689, CAS # 7664-93-9. Store @ R.T. Expires 3/31/10.

8/14/09 GN (I) 0.5 M Zinc Acetate - sulfides

- same as WC92015G. Exp 1year 8/14/10

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

TITLE PROJECT

Continued from page

9/3/09 (A) TKN Digest Reagent
SBR -same as WC92016A. Expires 10/3/09

9/3/09 (B) Alkalinity Reference Solution: 50 mg/L
KM Volumetrically add 10.0 mL of Alkalinity Reference Stock: 5000 mg/L (WC85294B) and dilute to 1L with DI. Store @ 4°C in a plastic bottle. exp. 10/30/09

9/4/09 (C) TKN Digest Reagent
Same as WC92016A Exp 10/4/09

9/4/09 (D) NH_3 Carrier/Diluent
NM -Same as WC92007C. Prepared solution x3

(E) Hypochlorite - NH_3
-Same as WC92011C. Prepare fresh each run.

9/4/09 (F) 0.02400 N $Na_2S_2O_3$
GN Dilute 50.0 mL 0.1N $Na_2S_2O_3$ (WC92020E) volumetrically w/DI to 200 mL. Store at 4°C in amber jar. Exp: 2 weeks 9/18/09

9/4/09 (G) Sodium Phenolate - NH_3
NM To a tared 1-L amber bottle add:
-88.8 g UPDI
-94.2 g Liquefied Phenol (WC92039G)
-32.0 g Sodium Hydroxide Pellets (WC92039I)
Stir until dissolved. Prepare and dissolve in hood.
Store @ 4°C. Exp. 1 year, 9/4/10.

Continued to page

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DISCLOSED TO AND UNDERSTOOD BY DATE

1mL DI. Bring up a plastic bottle

5/1/09 NM — (A) Buffer - TKN
-same as WC85270G. Exp. 1 month, 6/1/09.

in ~800mL DI. store in a plastic

5/1/09 BB — Received from VWR
(B) · (1) x 500g EDTA, disodium salt, dihydrate, Cat # EX0539-1, EMD Lot # 49037908, CAS # 6381-92-6. Store @ R.T. Expires 5/1/14 [9559]
(C) · (4) x 500g Potassium Sulfate, Cat # 3278-01, JT Baker Lot # E50158, CAS # 7778-80-5. Store @ R.T. Expires 5/1/14 [9560]
(D) · (10) x 100 Glass Microfibre filters, 691. Cat # 28333-12 VWR Lot # J1137494B Store in drawer @ solid bench Exp: NA [9561]

IL Alkalinity
2 to 1L with DI.
)130109

5/4/09 BB — (E) Alkalinity LCS/MS Stk, 1000 mg/L.
Dissolve 1.0590 g Na_2CO_3 (WC76232D) in ~800mL DI in a 1 L volumetric flask. Dilute to volume w/DI. Store in plastic @ 4°C Expires 11/4/09 [9604]

t # 4350-13, ate NA. [9531]

5/4/09 SBR — (F) TKN Digest Reagent
-same as WC85292J. Expires 6/4/09

45 $Na_2S \cdot 9H_2O$ Mix until xpires 5/14/09

5/4/09 CMW — (G) 1000ppm TMA Standard
Dilute 2mLs of 25% Trimethylamine (w/w) (WC85235D) to 500mLs w/ DI Water. Store @ 4°C in plastic. Expires after 1 year (5/4/2010).

2094-12, 85 43409
t # ~~2094~~-12, 7. Store @ R.T.

(H) 1000ppm TMAH Standard 5/4/09
Dissolve 2.094 g of Tetramethyl Ammonium Pentahydrate in DI water and dilute to 500mL volumetrically w/ DI Water. Store @ 4°C in plastic. Expires after 1 year (5/4/010).

t # SX1247/2 e @ R.T.

945-14, 2. Store @ R.T.

(H) 1000ppm TMAH Standard. Tetramethyl Ammonium Hydroxide 5/4/09
Dissolve 1.047g of ~~Tetramethylammonium~~ Pentahydrate (95% purum) (WC85235A) in DI Water and dilute to 500mL volumetrically w/ DI Water. Store @ 4°C in plastic. Expires after 1 year (5/4/10)

VWR 4/30/09

(A) Alkalinity LCS/MS Solution: 1000mg/L
Dissolve 1.0590g Na_2CO_3 (WC76232D) in ~800mL DI. Bring up to 1L volumetrically with DI. Store in a plastic bottle @ 4°C. exp. ~~10/6/09~~ 10/30/09

(B) Alkalinity Reference Stock: 5000mg/L
Dissolve 5.300g Na_2CO_3 (WC76294G) in ~800mL DI. Bring up to 1L volumetrically with DI. Store in a plastic bottle @ 4°C. exp. 10/30/09

(C) Alkalinity Reference Solution: 50mg/L
Volumetrically add 10mL of the 5000mg/L Alkalinity Reference Stock (WC85296B) and dilute to 1L with DI. Store in a plastic bottle @ 4°C. exp. 10/30/09

4/30/09 BB

Received from CPI
(D) (12) x 20 0/G Silver SPE disks, Cat # 4350-13, CPI Lot # 030609. Store @ RT Exp. date: NA. 9537

4/30/09 GN

(E) Sulfide Reference
To a tared amber jar add aprox. 0.4g $Na_2S \cdot 9H_2O$ (WC76230B) and dilute to 100g w/DI. Mix until dissolved. Store at 4°C for 2 weeks. Expires 5/14/09 Standardize w/each use.

4/30/09 BB

Received from VWR
(F) (1) x 500g Sodium Salicylate, Powder, Cat # ~~2094-12~~ 2094-12 JB 4/30/09, Mallinckrodt Lot # 643597, CAS # 54-21-7. Store @ R.T. Expires 4/30/14. 9545
(G) (4) x 2.5L Sulfuric Acid, Omnitrace, Cat # SX1247/2 EMD Lot # 47213, CAS # 7664-93-9. Store @ R.T. Expires 4/30/14 9546
(H) (1) x 2.5L Phosphoric Acid, Cat # PX0995-14, EMD Lot # 48175844, CAS # 7664-38-2. Store @ R.T. Expires 4/30/14 9547

5/1/09 NM

(A) Bu
-sa

5/1/09 BB

Received
(B) (1)
Cat
63
(C) (4)
JT
Expi
(D) (10)
VWR
Exp

5/4/09 BB

(E) Alkali
Lissa
in a
Stor

5/4/09 SBR

(F) TKN D
-same

5/4/09 CMW

(G) 1000
Dilute
(WC85
Store
1 year

(H) 1000
Dissolv
in DI
Volumet
in plast

(H) 1000
Dissol
Pentahyd
in DI
w/ DI

Analytical Results Summary

Instrument Name: R-FIA-01 **Analyst:** NMEAD **Analysis Lot:** 169141 **Method/Testcode:** 350.1M/Ammonia SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908042-01	Ammonia as Nitrogen	MB		Soil	0.01 mg/L		0.007 mg/L J	1	0.050			9/4/09 13:22:20	N	IV
RQ0908254-01	Ammonia as Nitrogen	LCS		Soil	0.50 mg/L		0.502 mg/L	1	0.050	100		9/4/09 13:21:22	N	IV
R0904817-001	Ammonia as Nitrogen	N/A		Soil	0.08 mg/L		0.081 mg/L	1	0.050			9/4/09 13:23:18	N	IV
RQ0908254-03	Ammonia as Nitrogen	DUP	R0904817-001	Soil	0.08 mg/L		0.079 mg/L	1	0.050		2	9/4/09 13:24:16	N	IV
RQ0908254-02	Ammonia as Nitrogen	MS	R0904817-001	Soil	0.58 mg/L		0.582 mg/L	1	0.050	100		9/4/09 13:25:14	N	IV
RQ0908043-01	Ammonia as Nitrogen	MB		Soil	0.01 mg/L		0.007 mg/L J	1	0.050			9/4/09 13:26:12	N	IV
R0904817-002	Ammonia as Nitrogen	N/A		Soil	0.08 mg/L		0.084 mg/L	1	0.050			9/4/09 13:27:09	N	IV

Creator: NMEAD
Creation Date: Sep 4, 2009 8:39:11
Last Modified: Sep 4, 2009 11:42:58
Description: QC 8000 350.1 Ammonia - RUN LOG - 0909040B

Cup #	Sample ID	Manual Dilution	Sample Type	
1	Standard A - 2.000	1.0000	CalStd	
2	Standard B - 1.000	1.0000	CalStd	
3	Standard C - 0.500	1.0000	CalStd	
4	Standard D - 0.200	1.0000	CalStd	
5	Standard E - 0.100	1.0000	CalStd	
6	Standard F - 0.050	1.0000	CalStd	
7	Standard G - 0.020	1.0000	CalStd	
8	Standard H - 0.010	1.0000	CalStd	
9	Standard I - 0.000	1.0000	CalStd	
1	ICV TV= 0.90	1.0000	Unknown	
2	ICB	1.0000	Unknown	
3	LCS TV= 0.500	1.0000	Unknown	
4	CRDL 0.050	1.0000	Unknown	
5	CRDL 0.010	1.0000	Unknown	
6	CCV	1.0000	Unknown	
7	CCB	1.0000	Unknown	
8	R0904693-010	1.0000	Unknown	
9	4693-010 DUP	1.0000	Unknown	
10	4693-010 SPK TV= 0.500	1.0000	Unknown	
11	R0904693-011	1.0000	Unknown	
12	R0904693-012	1.0000	Unknown	
13	R0904608-001	1.0000	Unknown	
14	4608-001 DUP	1.0000	Unknown	
15	R0904608-002	1.0000	Unknown	
16	4608-002 DUP	1.0000	Unknown	
17	4608-002 SPK TV= 0.500	1.0000	Unknown	
18	CCV	1.0000	Unknown	
19	CCB	1.0000	Unknown	
20	LCS	1.0000	Unknown	
21	R0904310-018	1.0000	Unknown	
22	R0904310-022	1.0000	Unknown	
23	R0904310-023	1.0000	Unknown	
24	4310-023 DUP	1.0000	Unknown	
25	4310-023 SPK TV= 0.500	1.0000	Unknown	
26	PB-1 SOIL	1.0000	Unknown	contaminated dilut water?
27	LCS-1 SOIL TV= 50.0	1.0000	Unknown	
28	R0904776-032	1.0000	Unknown	
29	4776-032 DUP	1.0000	Unknown	
30	CCV	1.0000	Unknown	
31	CCB	1.0000	Unknown	

Cup #	Sample ID	Manual Dilution	Sample Type	
32	4776-032 SPK TV= 50.0	1.0000	Unknown	
33	R0904776-033	1.0000	Unknown	
34	R0904776-034	1.0000	Unknown	
35	R0904776-035	1.0000	Unknown	
36	R0904776-036	1.0000	Unknown	
37	R0904776-045	1.0000	Unknown	
38	R0904782-001	1.0000	Unknown	
39	R0904782-002	1.0000	Unknown	
40	R0904782-003	1.0000	Unknown	
41	R0904782-004	1.0000	Unknown	
42	CCV	1.0000	Unknown	
43	CCB	1.0000	Unknown	
44	LCS	1.0000	Unknown	
45	R0904782-005	1.0000	Unknown	
46	~~R0904782-006~~ Dup of 001 Dilution water	1.0000	Unknown	- contaminated - Don report soils
47	R0904786-007	1.0000	Unknown	
48	4786-007 DUP	1.0000	Unknown	
49	4786-007 SPK TV= 50.0	1.0000	Unknown	
50	R0904782-008	1.0000	Unknown	
51	R0904782-009	1.0000	Unknown	
52	R0904782-010	1.0000	Unknown	
53	R0904782-011	1.0000	Unknown	
54	CCV	1.0000	Unknown	
55	CCB	1.0000	Unknown	
56	R0904782-012	1.0000	Unknown	
57	R0904782-013	1.0000	Unknown	
58	R0904782-014	1.0000	Unknown	
59	PB-2 SOIL	1.0000	Unknown	remade w/ fresh dilution water - confirms contamination
60	LCS-2 SOIL TV= 50.0	1.0000	Unknown	
61	R0904806-001	1.0000	Unknown	
62	4806-001 DUP	1.0000	Unknown	
63	4806-001 SPK TV= 50.0	1.0000	Unknown	
64	R0904806-002,	1.0000	Unknown	
65	R0904806-003	1.0000	Unknown	
66	CCV	1.0000	Unknown	
67	CCB	1.0000	Unknown	
68	LCS	1.0000	Unknown	
69	RQ0908042-01 MB	1.0000	Unknown	
70	R0904817-001	1.0000	Unknown	
71	4817-001 DUP	1.0000	Unknown	
72	4817-001 SPK TV= 0.500	1.0000	Unknown	
73	RQ0908043-01 MB	1.0000	Unknown	
74	R0904817-002	1.0000	Unknown	
75	FILTER BLANK	1.0000	Unknown	
76	FILTERED LCS TV= 0.500	1.0000	Unknown	

Cup #	Sample ID	Manual Dilution	Sample Type	
77	RQ0907725-01 MB (- PK)	1.0000	Unknown	< LOQ
78	CCV	1.0000	Unknown	
79	CCB (- PK)	1.0000	Unknown	< LOQ
80	R0904746-014 (- PK)	1.0000	Unknown	< LOQ
81	R0904746-015 (- PK)	1.0000	Unknown	< LOQ
82	R0904746-016 RPT@110 1/20	1.0000	Unknown	RPT @ 110 1/20
83	R0904746-017	1.0000	Unknown	
84	R0904746-018	1.0000	Unknown	
85	R0904746-019	1.0000	Unknown	
86	R0904746-020	1.0000	Unknown	
87	R0904746-025	1.0000	Unknown	
88	4746-025 DUP	1.0000	Unknown	
89	4746-025 SPK TV = 5.00	1.0000	Unknown	
90	CCV	1.0000	Unknown	
91	CCB	1.0000	Unknown	
92	LCS	1.0000	Unknown	
93	R0904769-002 (- PK)	1.0000	Unknown	< LOQ
94	R0904769-003 (- PK)	1.0000	Unknown	< LOQ
95	RQ0907796-01 MB (- PK)	1.0000	Unknown	< LOQ
96	R0904769-004 (- PK)	1.0000	Unknown	< LOQ
97	R0904769-005 (- PK)	1.0000	Unknown	< LOQ
98	R0904769-006 (- PK)	1.0000	Unknown	< LOQ
99	R0904769-007 (- PK)	1.0000	Unknown	< LOQ
100	R0904769-008 (- PK)	1.0000	Unknown	< LOQ
101	4769-008 DUP (- PK)	1.0000	Unknown	< LOQ
102	CCV	1.0000	Unknown	
103	CCB	1.0000	Unknown	
104	4769-008 SPK TV = 5.00	1.0000	Unknown	
105	R0904769-009 (- PK)	1.0000	Unknown	< LOQ
106	R0904769-010 (- PK)	1.0000	Unknown	< LOQ
107	R0904769-011 (- PK)	1.0000	Unknown	< LOQ
108	R0904769-012 (- PK)	1.0000	Unknown	< LOQ
109	R0904769-013 (- PK)	1.0000	Unknown	< LOQ
110	R0904746-016 RPT 1/20	20.0000	Unknown	
111	CCV	1.0000	Unknown	
112	CCB	1.0000	Unknown	

OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 1 to 25

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor
1	ICV TV= 0.90	04 Sep 2009	12:16:37	1	0.8477	1.0	1.00
2	ICB	04 Sep 2009	12:17:35	1	-0.0009	1.0	1.00
3	LCS TV= 0.500	04 Sep 2009	12:18:33	1	0.4977	1.0	1.00
4	CRDL 0.050	04 Sep 2009	12:19:31	1	0.0582	1.0	1.00
5	CRDL 0.010	04 Sep 2009	12:20:30	1	0.0155	1.0	1.00
6	CCV	04 Sep 2009	12:21:28	1	0.8648	1.0	1.00
7	CCB	04 Sep 2009	12:22:26	1	0.0030	1.0	1.00
8	R0904693-010	04 Sep 2009	12:23:23	1	0.0499	1.0	1.00
9	4693-010 DUP	04 Sep 2009	12:24:20	1	0.0513	1.0	1.00
10	4693-010 SPK TV= 0.500	04 Sep 2009	12:25:17	1	0.5055	1.0	1.00
11	R0904693-011	04 Sep 2009	12:26:14	1	0.0218	1.0	1.00
12	R0904693-012	04 Sep 2009	12:27:11	1	0.0316	1.0	1.00
13	R0904608-001	04 Sep 2009	12:28:09	1	0.3314	1.0	1.00
14	4608-001 DUP	04 Sep 2009	12:29:06	1	0.3336	1.0	1.00
15	R0904608-002	04 Sep 2009	12:30:03	1	0.7180	1.0	1.00
16	4608-002 DUP	04 Sep 2009	12:31:02	1	0.7090	1.0	1.00
17	4608-002 SPK TV= 0.500	04 Sep 2009	12:32:00	1	1.1806	1.0	1.00
18	CCV	04 Sep 2009	12:32:59	1	0.8526	1.0	1.00
19	CCB	04 Sep 2009	12:33:57	1	-0.0009	1.0	1.00
20	LCS	04 Sep 2009	12:34:55	1	0.5000	1.0	1.00
21	R0904310-018	04 Sep 2009	12:35:53	1	0.2133	1.0	1.00
22	R0904310-022	04 Sep 2009	12:36:51	1	0.0219	1.0	1.00
23	R0904310-023	04 Sep 2009	12:37:50	1	0.1377	1.0	1.00
24	4310-023 DUP	04 Sep 2009	12:38:48	1	0.1409	1.0	1.00
25	4310-023 SPK TV= 0.500	04 Sep 2009	12:39:45	1	0.6288	1.0	1.00

ran to confirm Konelab result

OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 26 to 50

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
26	PB-1 SOIL	04 Sep 2009	12:40:42	1	0.0606	1.0	1.00	> contaminated dilution water?
27	LCS-1 SOIL TV= 50.0	04 Sep 2009	12:41:39	1	0.5741	1.0	1.00	
28	R0904776-032	04 Sep 2009	12:42:36	1	0.0866	1.0	1.00	
29	4776-032 DUP	04 Sep 2009	12:43:33	1	0.0947	1.0	1.00	
30	CCV	04 Sep 2009	12:44:30	1	0.8614	1.0	1.00	
31	CCB	04 Sep 2009	12:45:30	1	0.0057	1.0	1.00	
32	4776-032 SPK TV= 50.0	04 Sep 2009	12:46:29	1	0.5475	1.0	1.00	
33	R0904776-033	04 Sep 2009	12:47:27	1	0.0673	1.0	1.00	
34	R0904776-034	04 Sep 2009	12:48:26	1	0.0695	1.0	1.00	
35	R0904776-035	04 Sep 2009	12:49:24	1	0.1100	1.0	1.00	
36	R0904776-036	04 Sep 2009	12:50:22	1	0.0924	1.0	1.00	
37	R0904776-045	04 Sep 2009	12:51:20	1	0.0969	1.0	1.00	
38	R0904782-001	04 Sep 2009	12:52:18	1	0.1021	1.0	1.00	
39	R0904782-002	04 Sep 2009	12:53:16	1	0.1398	1.0	1.00	
40	R0904782-003	04 Sep 2009	12:54:14	1	0.0929	1.0	1.00	
41	R0904782-004	04 Sep 2009	12:55:11	1	0.1397	1.0	1.00	
42	CCV	04 Sep 2009	12:56:08	1	0.8600	1.0	1.00	
43	CCB	04 Sep 2009	12:57:06	1	0.0041	1.0	1.00	
44	LCS	04 Sep 2009	12:58:03	1	0.5044	1.0	1.00	
45	R0904782-005	04 Sep 2009	12:59:00	1	0.2567	1.0	1.00	
46	DILUTION WATER	04 Sep 2009	12:59:59	1	0.0612	1.0	1.00	- contaminated - do not report soils
47	R0904786-007	04 Sep 2009	13:00:58	1	0.2917	1.0	1.00	
48	4786-007 DUP	04 Sep 2009	13:01:57	1	0.1919	1.0	1.00	
49	4786-007 SPK TV= 50.0	04 Sep 2009	13:02:56	1	0.8991	1.0	1.00	
50	R0904782-008	04 Sep 2009	13:03:54	1	0.0891	1.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 51 to 75

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor
51	R0904782-009	04 Sep 2009	13:04:52	1	0.0599	1.0	1.00
52	R0904782-010	04 Sep 2009	13:05:50	1	0.1164	1.0	1.00
53	R0904782-011	04 Sep 2009	13:06:48	1	0.1159	1.0	1.00
54	CCV	04 Sep 2009	13:07:46	1	0.8648	1.0	1.00
55	CCB	04 Sep 2009	13:08:44	1	-0.0009	1.0	1.00
56	R0904782-012	04 Sep 2009	13:09:43	1	0.1400	1.0	1.00
57	R0904782-013	04 Sep 2009	13:10:40	1	0.0964	1.0	1.00
58	R0904782-014	04 Sep 2009	13:11:37	1	0.1237	1.0	1.00
59	PB-2 SOIL	04 Sep 2009	13:12:34	1	0.0074	1.0	1.00
60	LCS-2 SOIL TV= 50.0	04 Sep 2009	13:13:31	1	0.5148	1.0	1.00
61	R0904806-001	04 Sep 2009	13:14:30	1	0.2231	1.0	1.00
62	4806-001 DUP	04 Sep 2009	13:15:30	1	0.2225	1.0	1.00
63	4806-001 SPK TV= 50.0	04 Sep 2009	13:16:29	1	0.7329	1.0	1.00
64	R0904806-002	04 Sep 2009	13:17:28	1	0.0767	1.0	1.00
65	R0904806-003	04 Sep 2009	13:18:27	1	0.0853	1.0	1.00
66	CCV	04 Sep 2009	13:19:25	1	0.8658	1.0	1.00
67	CCB	04 Sep 2009	13:20:24	1	0.0039	1.0	1.00
68	LCS	04 Sep 2009	13:21:22	1	0.5018	1.0	1.00
69	RQ0908042-01 MB	04 Sep 2009	13:22:20	1	0.0074	1.0	1.00
70	R0904817-001	04 Sep 2009	13:23:18	1	0.0805	1.0	1.00
71	4817-001 DUP	04 Sep 2009	13:24:16	1	0.0793	1.0	1.00
72	4817-001 SPK TV= 0.500	04 Sep 2009	13:25:14	1	0.5816	1.0	1.00
73	RQ0908043-01 MB	04 Sep 2009	13:26:12	1	0.0071	1.0	1.00
74	R0904817-002	04 Sep 2009	13:27:09	1	0.0842	1.0	1.00
75	FILTER BLANK	04 Sep 2009	13:28:06	1	-0.0009	1.0	1.00

remade w/ fresh dilution water - confirm contamination

OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 76 to 100

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
76	FILTERED LCS TV= 0.500	04 Sep 2009	13:29:05	1	0.5038	1.0	1.00	
77	RQ0907725-01 MB	04 Sep 2009	13:30:04	1	0.0219	1.0	1.00	- Neg. peak - <LOQ
78	CCV	04 Sep 2009	13:31:03	1	0.8646	1.0	1.00	
79	CCB	04 Sep 2009	13:32:02	1	-0.0009	1.0	1.00	(*)
80	R0904746-014	04 Sep 2009	13:33:02	1	0.0098	1.0	1.00	(*)
81	R0904746-015	04 Sep 2009	13:34:00	1	0.0102	1.0	1.00	(*)
82	R0904746-016	04 Sep 2009	13:34:58	1	15.8953	1.0	1.00	- QC# 110-1/20
83	R0904746-017	04 Sep 2009	13:35:56	1	1.1230	1.0	1.00	
84	R0904746-018	04 Sep 2009	13:36:54	1	0.1623	1.0	1.00	
85	R0904746-019	04 Sep 2009	13:37:52	1	0.0855	1.0	1.00	
86	R0904746-020	04 Sep 2009	13:38:51	1	0.0487	1.0	1.00	
87	R0904746-025	04 Sep 2009	13:39:49	1	0.0041	1.0	1.00	
88	4746-025 DUP	04 Sep 2009	13:40:47	1	0.0169	1.0	1.00	
89	4746-025 SPK TV= 5.00	04 Sep 2009	13:41:45	1	0.5204	1.0	1.00	
90	CCV	04 Sep 2009	13:42:42	1	0.8636	1.0	1.00	
91	CCB	04 Sep 2009	13:43:42	1	0.0012	1.0	1.00	
92	LCS	04 Sep 2009	13:44:41	1	0.5004	1.0	1.00	
93	R0904769-002	04 Sep 2009	13:45:40	1	0.0197	1.0	1.00	(*)
94	R0904769-003	04 Sep 2009	13:46:39	1	0.0122	1.0	1.00	(*)
95	RQ0907796-01 MB	04 Sep 2009	13:47:38	1	0.0092	1.0	1.00	(*)
96	R0904769-004	04 Sep 2009	13:48:37	1	0.0265	1.0	1.00	(*)
97	R0904769-005	04 Sep 2009	13:49:36	1	0.0274	1.0	1.00	(*)
98	R0904769-006	04 Sep 2009	13:50:36	1	0.0257	1.0	1.00	(*)
99	R0904769-007	04 Sep 2009	13:51:34	1	0.0173	1.0	1.00	(*)
100	R0904769-008	04 Sep 2009	13:52:32	1	0.0224	1.0	1.00	(*)

(*) - Neg peak - <LOQ

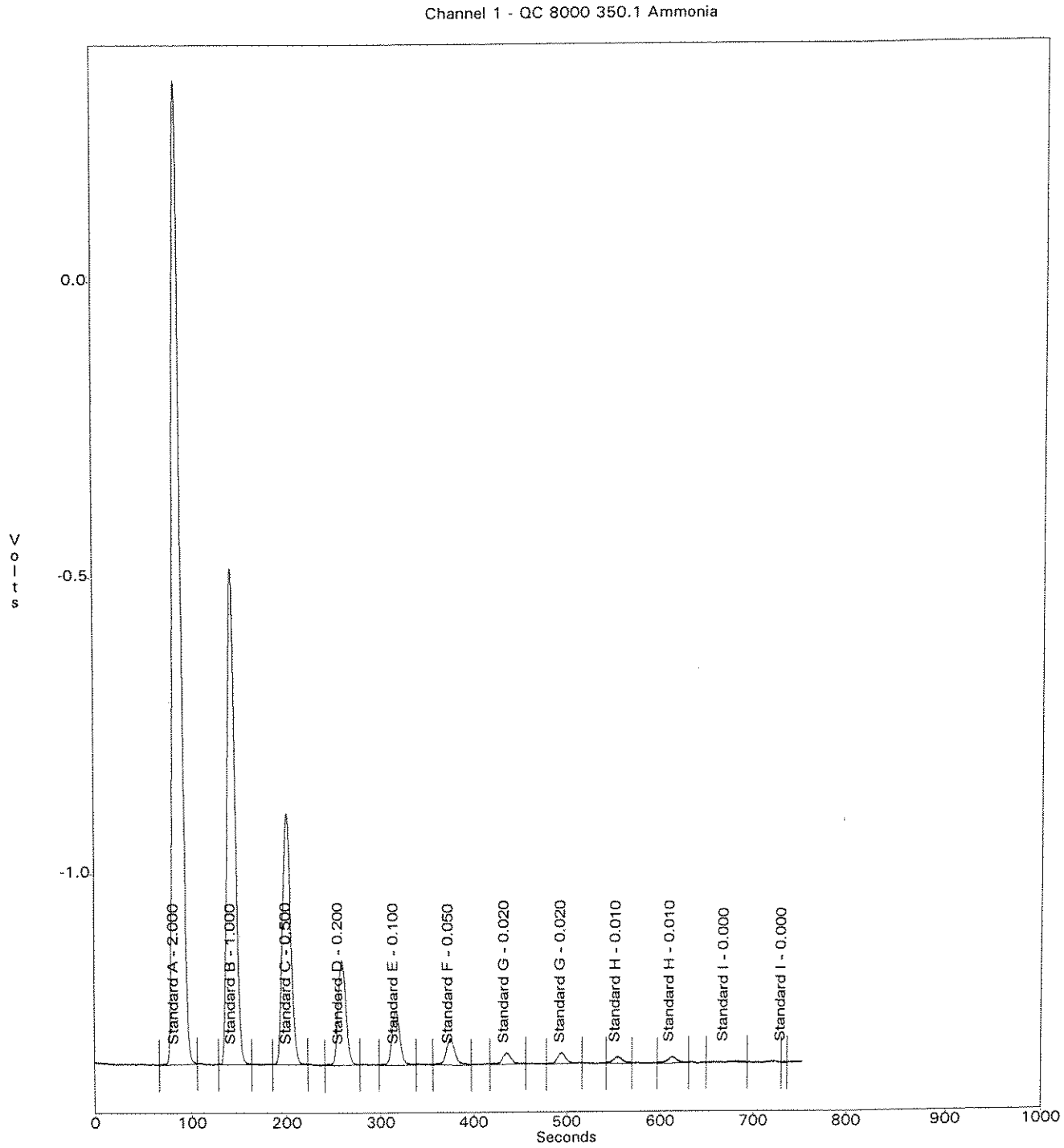
OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 101 to 125

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor
101	4769-008 DUP	04 Sep 2009	13:53:30	1	-0.0009	1.0	1.00 ⊗
102	CCV	04 Sep 2009	13:54:29	1	0.8617	1.0	1.00
103	CCB	04 Sep 2009	13:55:27	1	0.0069	1.0	1.00
104	4769-008 SPK TV= 5.00	04 Sep 2009	13:56:25	1	0.4794	1.0	1.00
105	R0904769-009	04 Sep 2009	13:57:23	1	0.0239	1.0	1.00 ⊗
106	R0904769-010 (- PK)	04 Sep 2009	13:58:23	1	0.0211	1.0	1.00 ⊗
107	R0904769-011	04 Sep 2009	13:59:22	1	0.0203	1.0	1.00 ⊗
108	R0904769-012	04 Sep 2009	14:00:22	1	0.0116	1.0	1.00 ⊗
109	R0904769-013	04 Sep 2009	14:01:21	1	0.0245	1.0	1.00 ⊗
110	R0904746-016 RPT 1/20	04 Sep 2009	14:02:20	1	25.4177	20.0	1.00
111	CCV	04 Sep 2009	14:03:19	1	0.8794	1.0	1.00
112	CCB	04 Sep 2009	14:04:19	1	0.0066	1.0	1.00

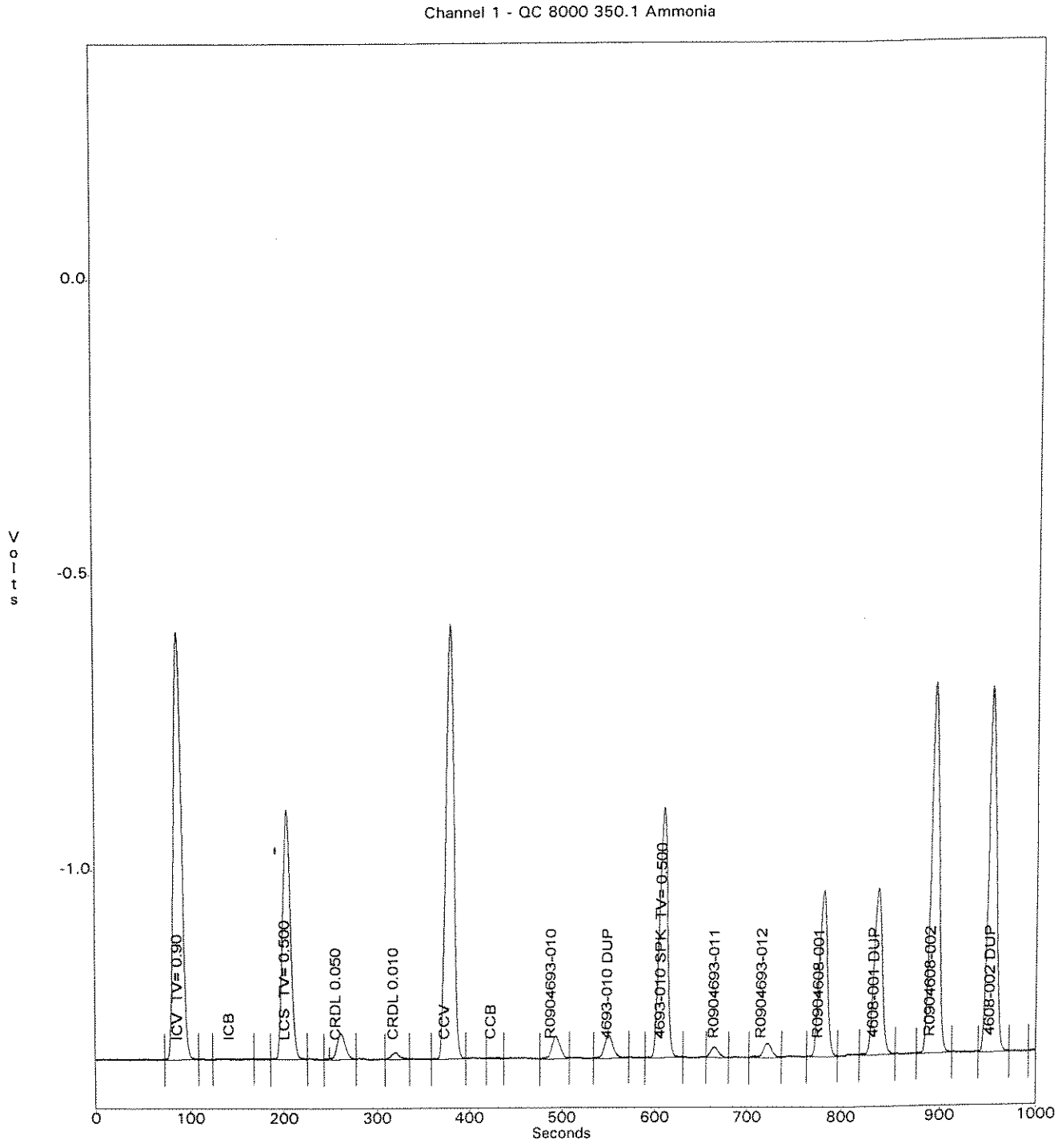
⊗ - neg peak - < LOQ

OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:02:32
DATA FILENAME: C:\OMNION\DATA\0909040B.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

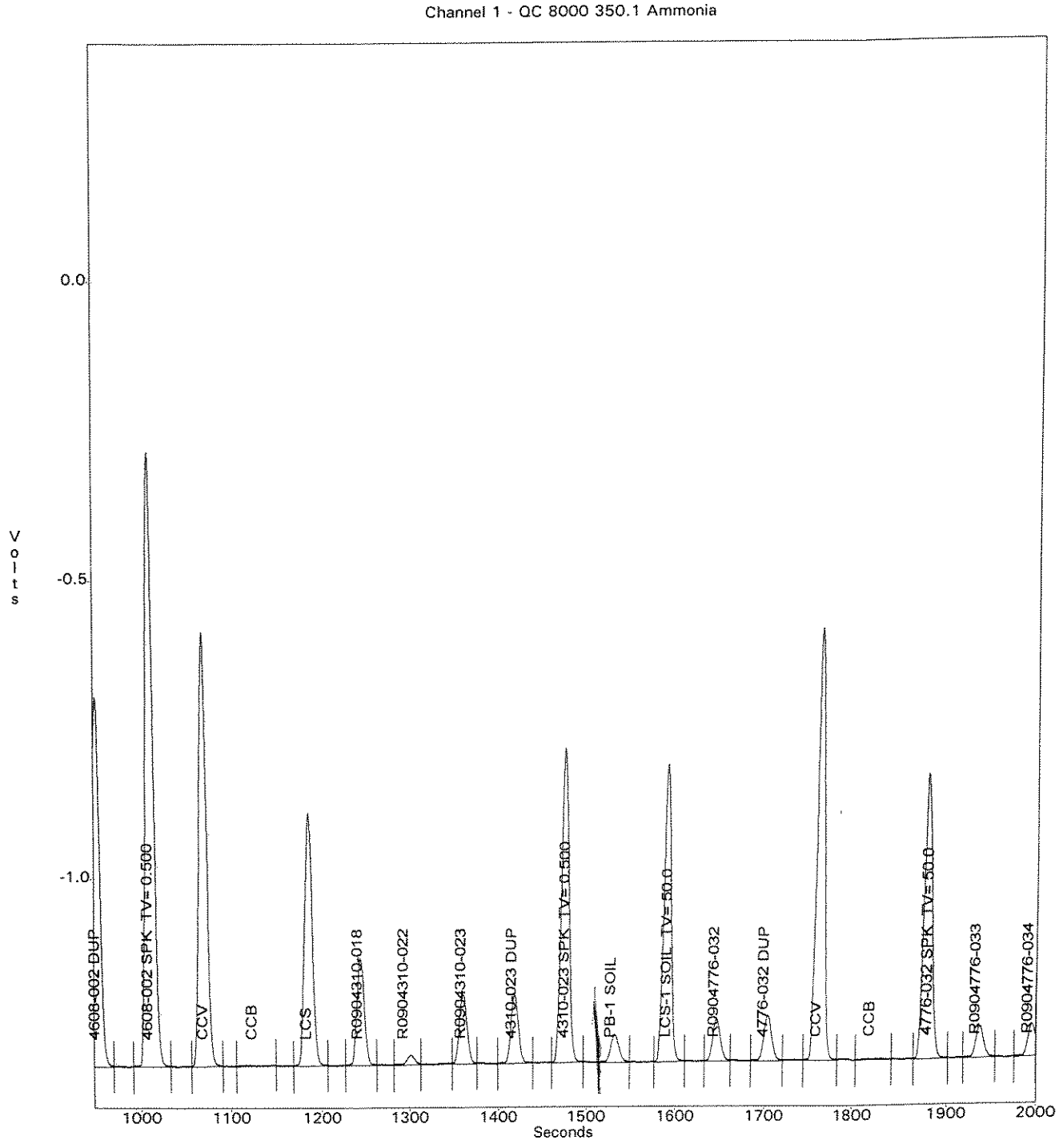


00436

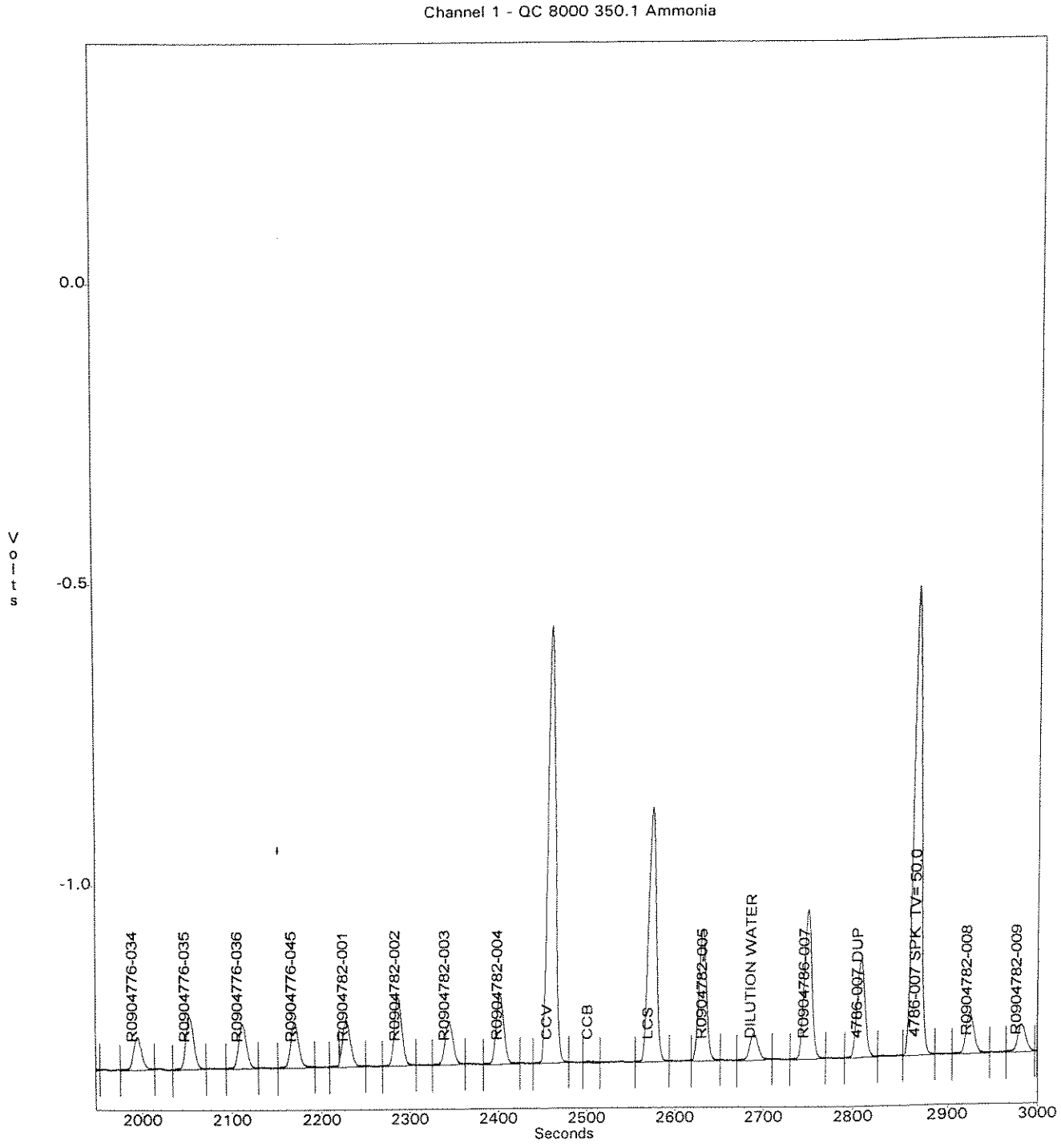
OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA



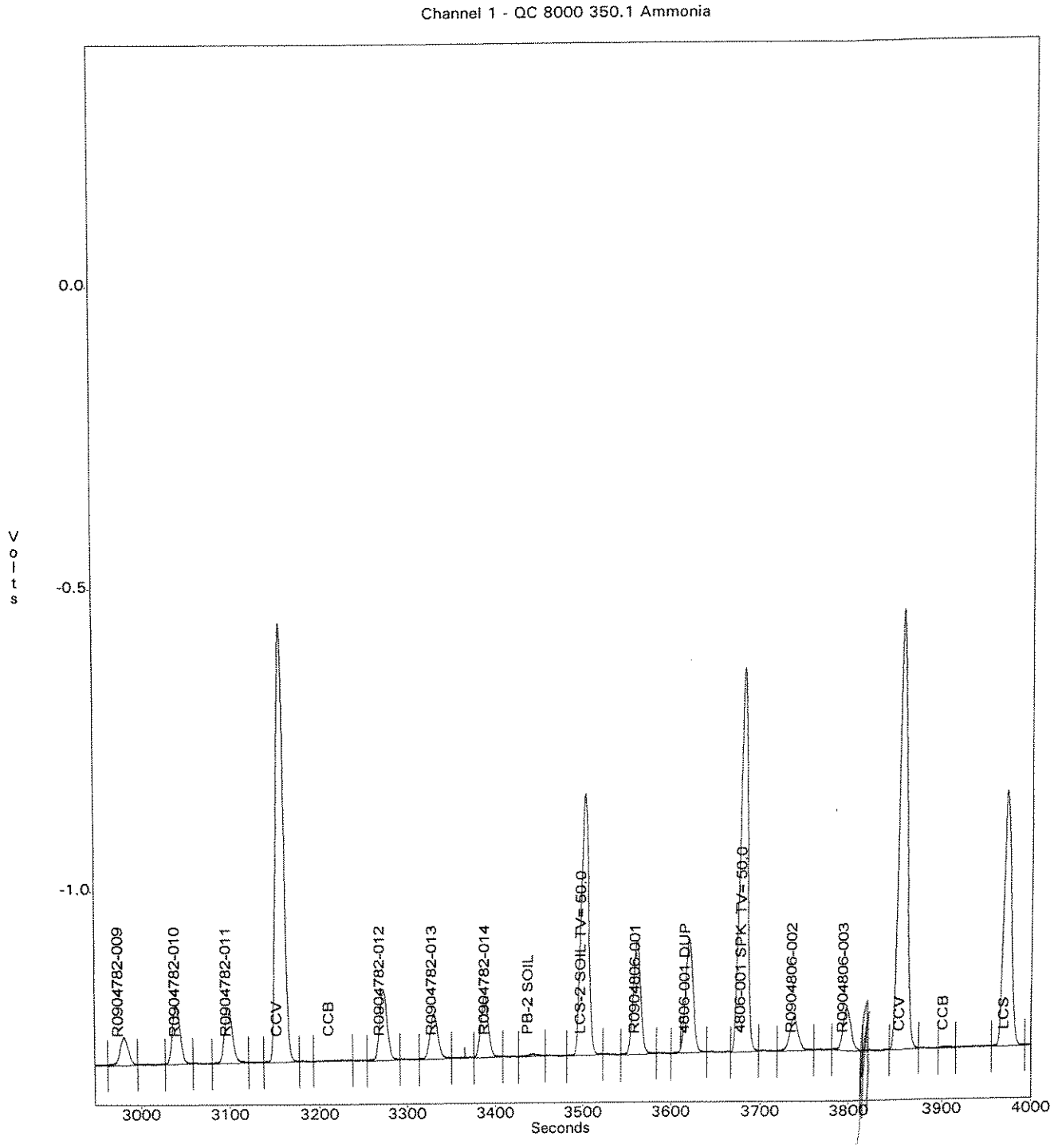
OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA



OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

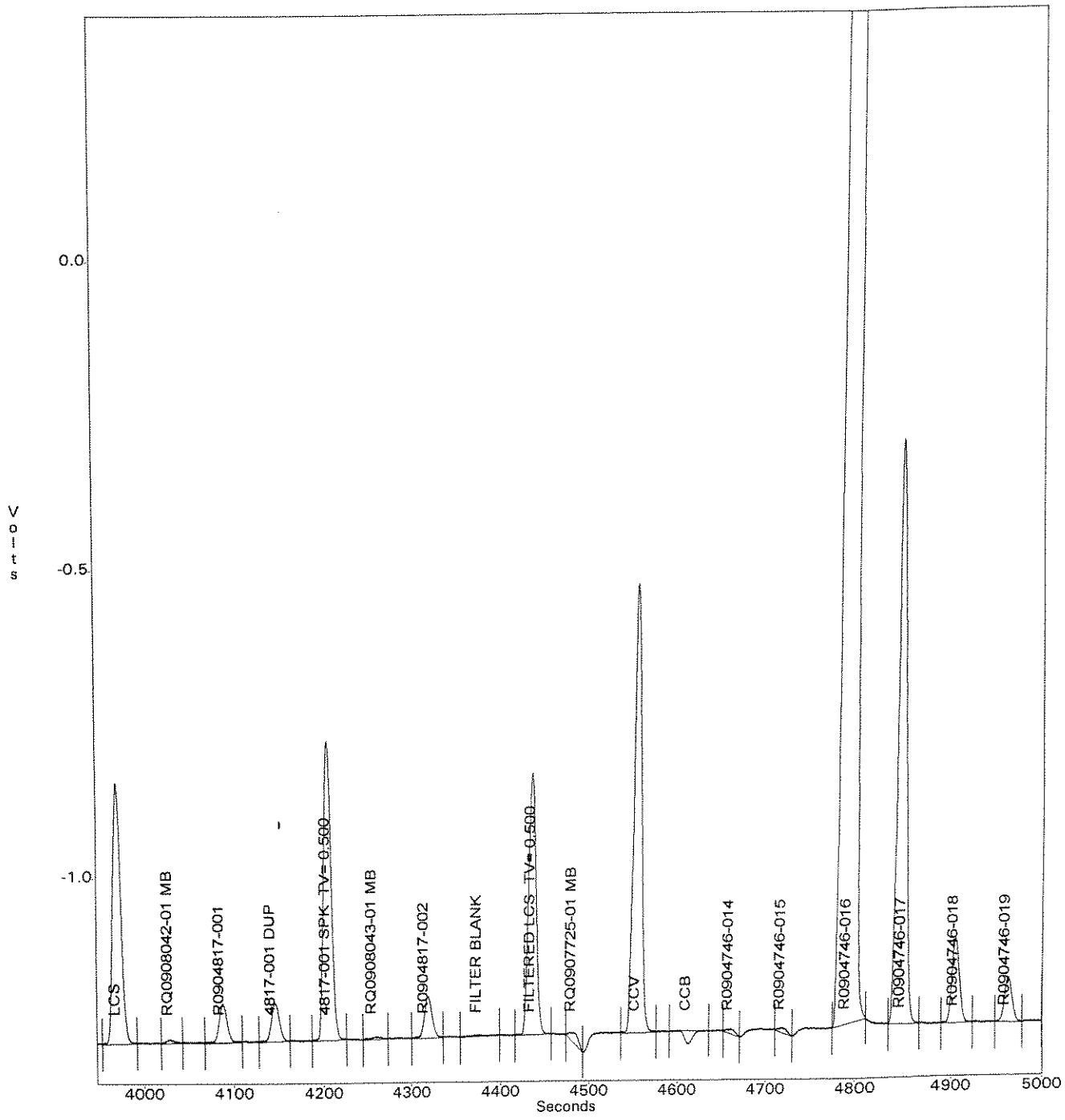


OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

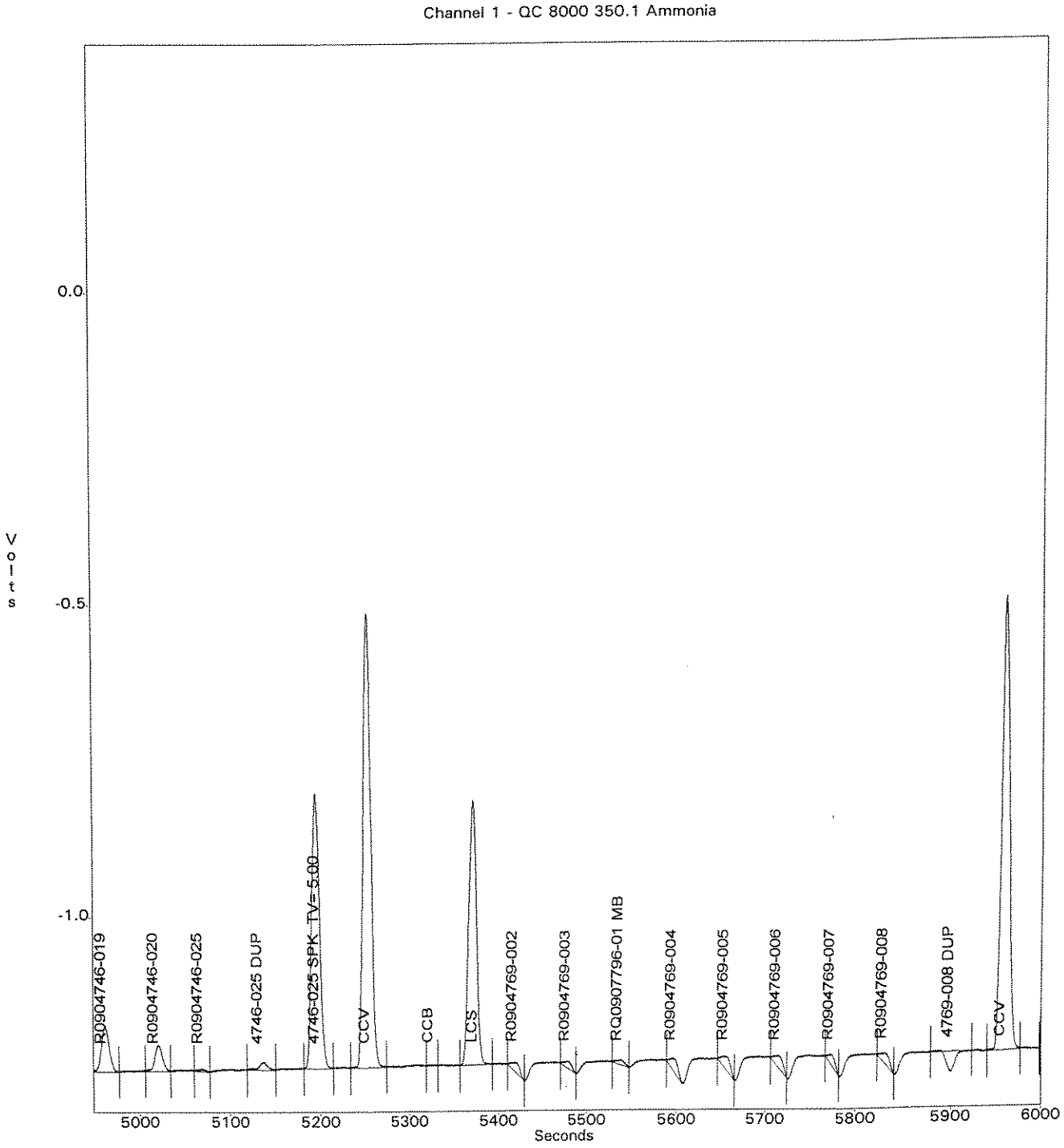


OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

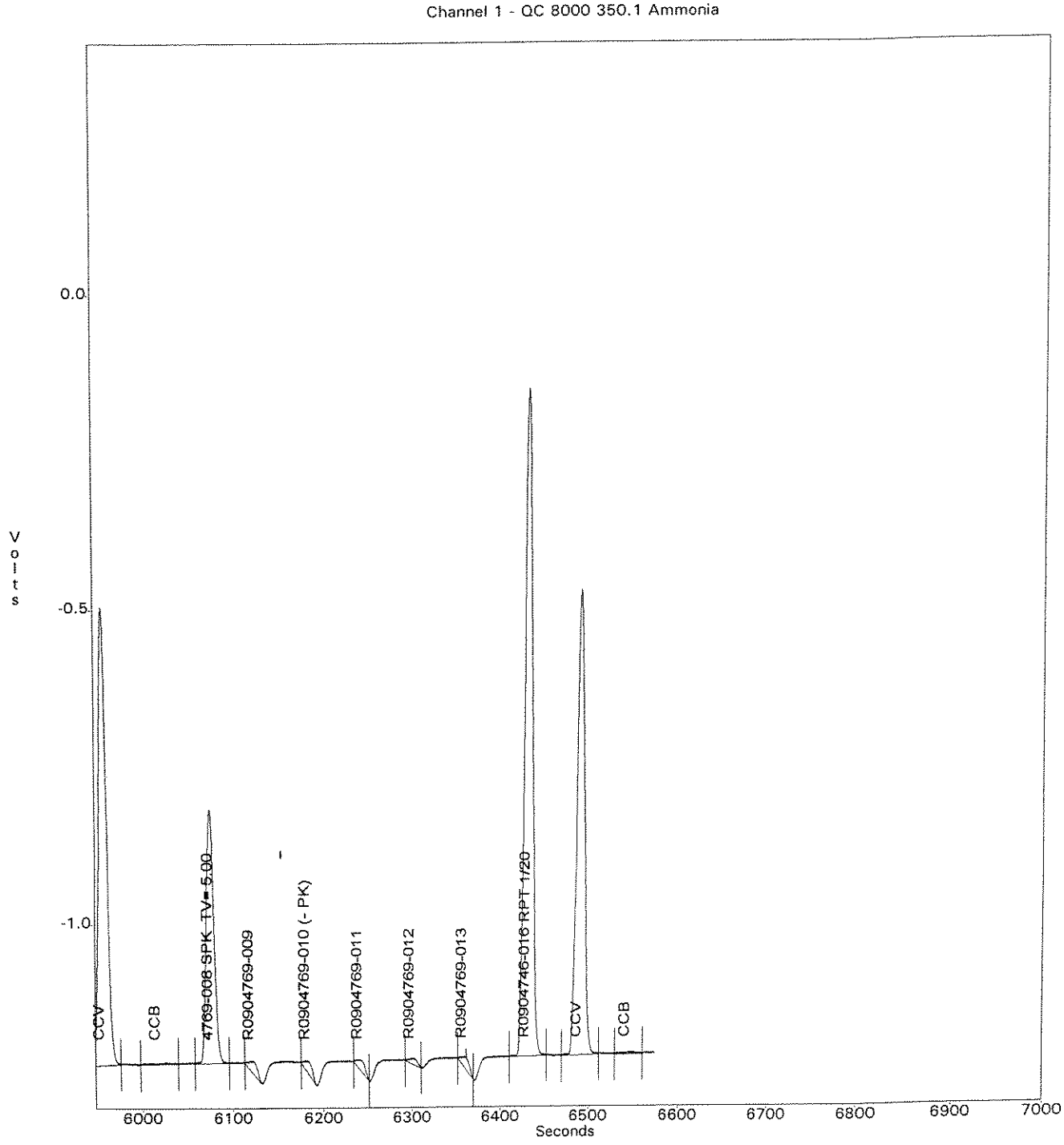
Channel 1 - QC 8000 350.1 Ammonia



OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA



OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:16:34
DATA FILENAME: C:\OMNION\DATA\090904B1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA



OPERATOR: NMEAD
ACQ. TIME: Sep 4, 2009 12:02:32
DATA FILENAME: C:\OMNION\DATA\0909040B.FDT
METHOD FILENAME:
TRAY FILENAME: C:\OMNION\TRAYS\0909040B.TRA

TRAY DESCRIPTION:
Created: Sep 4, 2009 8:39:11
Modified: Sep 4, 2009 11:42:58
QC 8000 350.1 Ammonia - RUN LOG - 0909040B
DATA DESCRIPTION:
Created: Sep 4, 2009 12:02:32
Modified: Sep 4, 2009 12:02:32

Method - Ch. 1 (QC 8000 350.1 Ammonia)

METHOD DESCRIPTION:
Created: Jun 8, 2007 13:44:01
Modified: Sep 4, 2009 14:33:06
Ammonia

ANALYTE DATA:
Analyte Name: QC 8000 350.1 Ammonia
Concentration Units: mg/L
Chemistry: Direct
Inject to Peak Start (s): 28.5
Peak Base Width (s): 22.000
% Width Tolerance: 50.000
Threshold: 2877.000
Autodilution Trigger: Off
QuikChem Method:

CALIBRATION DATA:
Levels:
1 : 2.000 2 : 1.000 3 : 0.500 4 : 0.200
5 : 0.100 6 : 0.050 7 : 0.020 8 : 0.010
9 : 0.000
Calibration Rep Handling: Average
Calibration Fit Type: 1st Order Poly
Force Though Zero: No
Weighting Method: 1/X
Concentration Scaling: None

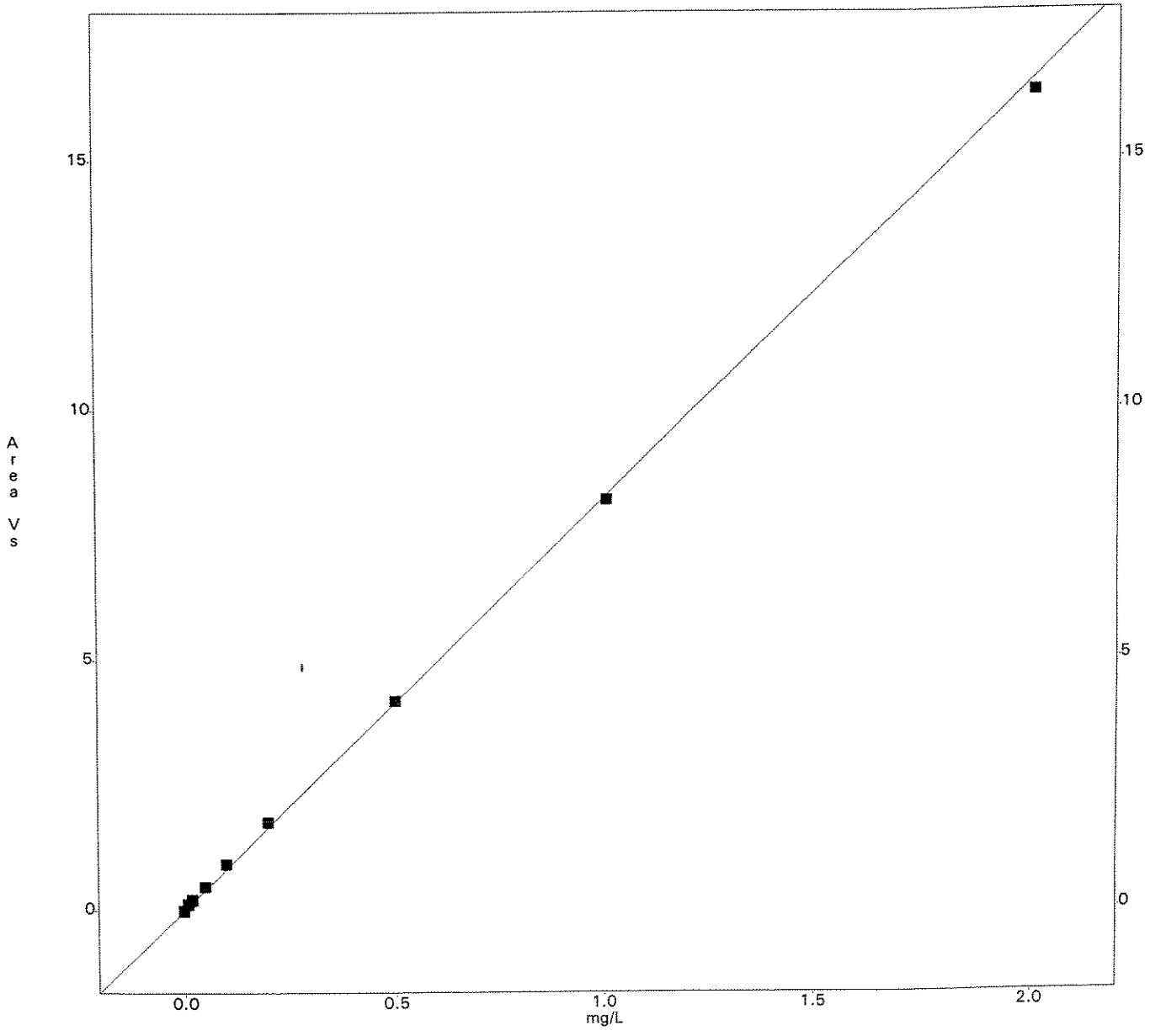
QC 8000 350.1 Ammonia

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	16358301	2.00	16358301					0.0	0.0	1.7
2	8215815	1.00	8215815					0.0	0.0	1.3
3	4193882	0.50	4193882					0.0	0.0	-0.7
4	1774243	0.20	1774243					0.0	0.0	-6.2
5	933760	0.10	933760					0.0	0.0	-11.4
6	490637	0.05	490637					0.0	0.0	-16.2
7	219927	0.02	211216	228637				12318.5	5.6	-27.7
8	134066	0.01	136707	131424				3735.6	2.8	-52.0
9	4243	0.00	8486	0				6000.5	141.4	

Pipette ID's: E-2
ALF

1st Order Poly
Conc = 1.203e-007 Area - 9.220e-004
r = 0.9998

Scaling: None - Weighting: 1/X



Printed: Friday, September 04, 2009 - 12:16 PM

00445

Columbia Analytical Services
1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: N. Mead Date: 9/4/09

Analysis: Ammonia Instrument: Lachat

Quality Control:

	Same as Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC65166A, 4/7/03	WC85257E, 1/19/09				
b) ICV Preparation:	WC92071F, 8/26/09	WC85257G, 1/19/09	0.5	18	10	0.90
c) LCS Preparation:	WC65166D, 4/7/03	WC85257E, 1/19/09	0.05	100	10	0.50
d) Matrix Spike Prep.:	WC65166D, 4/7/03	WC85257E, 1/19/09	0.05	100	10	0.50

Instrument log filled in? (Y) (N)

Packages: Copy and attach Standards Preparation

Comments:

p:\greg\forms\cover.nh3

4/7/03 DMG

Ammonia (NH_3) [Lachat: PQL = 0.050 Reg Level, 0.010 - Low Le

(A) STANDARDS

STD.	CONC (mg/L)	mls 10ppm (WC65166C)	mls Carrier-Diluent
A	2.000	2.00	8.00
B	1.000	1.00	9.00
C	0.500	0.50	9.50
D	0.200	0.20	9.80
E	0.100	1/10 Dil'N of STD B.) 1.000	
F	0.050	1/10 Dil'N of STD C.) 0.500	
G	0.020	1/10 Dil'N of STD D.) 0.200	
H	0.010	1/10 Dil'N of STD E.) 0.100	
I	0.000	10 mls of Carrier-Diluent	

(B) Icv/ccv: (TV = 1.80 mg/L)

Do two (2) 1/10 serial dilutions of the 180 ppm Reference Stock (WC65156B). Prepare using Carrier-Diluent (WC65165F)

(C) 10.0 ppm Working Stock

Do two (2) 1/10 serial dilutions of the 1000 ppm Standard Stock (WC65156A). Prepare using Carrier-Diluent (WC65165F)

(D) Lcs/Matrix Spike: (TV = 0.500 mg/L)

Add 0.050 mls 100 ppm working Stock (WC65166C, 1st 1/10 serial dilution) to 10 mls Carrier-Diluent (WC65165F) or sample.

h run.

in 4C

to 1000 g w/ DI.

(735T)

Diphenylcarbonylazide in mg to volume. Store at

n x 3.

each run,

21/09.

g Eriochrome BlackT Shake well to mix.

n DI Fresh per run

) with DI. Fresh per run.

) in 0.10 g EDTA (WC6521OC)

1 amber glass.

1/15/09 NH3

(A) Buffer - NH_3
- same as WC85247I. Exp. 1 year, 1/15/10.

(B) Buffer - TKN
- same as WC85246C. Exp. 1 month, 2/15/09.

1/09 Chem

(C) NO_2 Color Reagent - Konelab
In 100 ml vol flask, dissolve 1.00 g sulfanimide (WC65167F) and 0.10 g NED (WC7626 in 10 ml H_3PO_4 (WC7622H4F) Bring to volume with DI. Store at 4°C Exp 2/5/09

1/14/09 SBR

(D) Rhodamine Indicator Soln
Dissolve 0.020 g 5-(4-DMAB), Rhodamine (WC76615E) in 100 mL Acetone (WC64232E). Store in glass @ R.T. Expires 1/19/10

1/19/09 SBR

(E) NH_3 | TKN 1000 ppm Standard Stock
3.819 g granular NH_4Cl (WC85085F), previously dried for 2 hrs @ 140°C dissolve in ~800 mL DI in a 1 L volumetric flask. Bring to volume with DI. Store @ 4°C in amber glass. Expires 1/19/10

(F) 500 ppm Organic TKN Standard
In a 1 Liter vol. flask, dissolve 5.252 g L-glutamic acid (WC85029A) in ~800 mL DI. Bring to volume with DI. Store @ 4°C in amber glass Expires 1/19/10.
TV = 500 mg/L nitrogen

(G) NH_3 180 ppm Reference Stock
0.687 g granular NH_4Cl (WC85085G), previously dried for 2 hrs @ 104°C : dissolve in ~800 mL DI in a 1 L vol flask. Bring to volume with DI Store @ 4°C in amber glass. Expires 1/19/10.

(H) TKN 400 ppm Reference Stock
1.5276 g granular NH_4Cl (WC85085G), previously dried for 2 hrs @ ~~104°C~~ same method : dissolve in ~800 mL DI in a 1 L vol. flask. Bring to volume with DI. Store @ 4°C in amber glass Expires 1/19/10

1/19/09 EW

(I) TSS Reference
0.2122 g Kaolin (WC69285G) brought to 1000 g (W) DI. Store in plastic bottle @ 4°C (7483)
TV = 212 mg/L Exp: 1/19/10

TITLE **PROJECT**

Continued from page

8/25/09 (A) MBAS Wash Solution
DPW To a tared 2L Vol. Flask add: 100g Sodium phosphate mono basic monohydrate (WC920354) and 13.7mL conc. H_2SO_4 (WC920603). Bring to volume w/ DI. Store @ RT, Exp: 8/25/2010

8/25/09 (B) 1:1 H_2SO_4 - Cn Distillation
Jxp Same as WC120627E Exp 8/25/10

8/26/09 (C) Hypochlorite - NH_3
NM -400 mLs Sodium Hypochlorite (WC920606F)
-400 mLs UP DI
Prepare fresh each run.

8/26/09 (D) 1.0ppm Working Reference Stock
DPW Dilute 1.0mL of 1000ppm LAS Reference Stock (WC920116L) to 1L volumetrically w/ DI, Store @ 4°C, Exp: ~~8/26/10~~ 8/26/2010

8/26/09 (E) Iodide-Iodate Titrant - Sulfite
Jxp In a 1L vol flask dilute 0.4428g KIO_3 (WCES239A), 4.25g KI (WCES285J) and 0.310g $NaHCO_3$ (WCES271C) to volume with DI. Store at 4C. Exp 8/26/10

8/26/09 (F) Ammonia (NH_3) [Lachat: LOQ = 0.050 Reg. Level, 0.010 - Low level]
NM

ICV/CCV: (TV = 0.90 mg/L)
Do ~~1 mL~~ 8/26/09 one (1) 1/10 serial dilution of the 180ppm Reference Stock (WC#52576). Add 0.5mL of this 18.0 ppm stock to 9.5 mL NH_3 Carrier/Diluent.

Continued to page

SIGNATURE DATE
✓ 8/26/09
DISCLOSED TO AND UNDERSTOOD BY DATE

Analytical Results Summary

Instrument Name: R-TOC-01 **Analyst:** CSCHRADER **Analysis Lot:** 170520 **Method/Testcode:** 9060/TOC SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908686-01	Carbon, Total Organic	LCS		Soil	9.20 ppm ✓		9.20 mg/L	1	1.0	92		9/15/09 15:56	N	IV
RQ0908042-01	Carbon, Total Organic	MB		Soil	0.25 ppm ✓		0.2 mg/L J	1	1.0			9/15/09 16:31	N	IV
R0904817-001	Carbon, Total Organic	N/A		Soil	0.43 ppm ✓		0.4 mg/L J	1	1.0			9/15/09 17:40	N	IV

R4817
R4903
2 copies

Reviewed & Approved
By: CL
Date: 9/17/09

Analytical Results Summary

Instrument Name: R-TOC-01 **Analyst:** CSCHRADER **Analysis Lot:** 170521 **Method/Testcode:** 9060/TOC SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908687-01	Carbon, Total Organic	LCS		Soil	9.20 ppm ✓		9.20 mg/L	1	1.0	92		9/15/09 15:56	N	IV
RQ0908043-01	Carbon, Total Organic	MB		Soil	0.23 ppm ✓		0.2 mg/L J	1	1.0			9/15/09 17:05	N	IV
R0904817-002	Carbon, Total Organic	N/A		Soil	0.47 ppm ✓		0.5 mg/L J	1	1.0			9/15/09 18:14	N	IV

15 Sep 09

Preparation Information Benchsheet

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: D Bond Date: 9/1/09

Received By: Matt Cam Date: 9/1/09 1305

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: DB Date: 9/1/09

Received By: Mattie Cary Date: 9/1/09 1305

Extracts Examined
Yes No

****

** SEQUENCE **

****

091509 Tue Sep 15 13:09:04 2009

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
1	CCV	tocl	Chk. 5	4	1.000	0	1.00	No	
2	CCB	tocl	Chk. 5	4	1.000	0	1.00	No	
3	LCS	tocl	Chk. 5	4	1.000	0	1.00	No	
4	MB-8042	tocl	Sample	4	1.000	0	1.00	No	
5	MB-8043	tocl	Sample	4	1.000	0	1.00	No	
6	R0904817-001	tocl	Sample	4	1.000	0	1.00	No	
7	R0904817-002	tocl	Sample	4	1.000	0	1.00	No	
8	R0904739-003	tocl	Sample	2	1.000	0	1.00	No	4
9	R0904739-007	tocl	Sample	2	1.000	0	1.00	No	4
10	R0904739-008	tocl	Sample	2	1.000	0	1.00	No	4
11	R0904739-012	tocl	Sample	2	1.000	0	1.00	No	4
12	R0904880-003	tocl	Sample	2	1.000	0	1.00	No	4
13	CCV	tocl	Chk. 5	4	1.000	0	1.00	No	
14	CCB	tocl	Chk. 5	4	1.000	0	1.00	No	
15	R0904903-001	tocl	Sample	2	1.000	0	1.00	No	
16	R0904903-001DUP	tocl	Sample	2	1.000	0	1.00	No	
17	R0904903-001SPK	tocl	Sample	2	1.000	0	1.00	No	
18	R0904903-002	tocl	Sample	2	1.000	0	1.00	No	
19	R0904903-004	tocl	Sample	2	1.000	0	1.00	No	
20	R0904903-005	tocl	Sample	2	1.000	0	1.00	No	
21	R0904903-005DUP	tocl	Sample	2	1.000	0	1.00	No	
22	R0904903-005SPK	tocl	Sample	2	1.000	0	1.00	No	
23	R0904903-006	tocl	Sample	2	1.000	0	1.00	No	
24	R0904903-008	tocl	Sample	2	1.000	0	1.00	No	
25	CCV	tocl	Chk. 5	2	1.000	0	1.00	No	
26	CCB	tocl	Chk. 5	2	1.000	0	1.00	No	
27	LCS	tocl	Chk. 5	2	1.000	0	1.00	No	
28	R0904903-009	tocl	Sample	2	1.000	0	1.00	No	
29	R0904903-010	tocl	Sample	2	1.000	0	1.00	No	
30	R0904903-010DUP	tocl	Sample	2	1.000	0	1.00	No	
31	R0904903-010SPK	tocl	Sample	2	1.000	0	1.00	No	
32	R0904903-011	tocl	Sample	2	1.000	0	1.00	No	
33	R0904903-012	tocl	Sample	2	1.000	0	1.00	No	
34	R0904903-014	tocl	Sample	2	1.000	0	1.00	No	
35	R0904903-015	tocl	Sample	2	1.000	0	1.00	No	
36	R0904903-017	tocl	Sample	2	1.000	0	1.00	No	
37	CCV	tocl	Chk. 5	2	1.000	0	1.00	No	
38	CCB	tocl	Chk. 5	2	1.000	0	1.00	No	
39	R0904903-018	tocl	Sample	2	1.000	0	1.00	No	
40	R0904903-020	tocl	Sample	2	1.000	0	1.00	No	
41	R0904903-020DUP	tocl	Sample	2	1.000	0	1.00	No	
42	R0904903-020SPK	tocl	Sample	2	1.000	0	1.00	No	
43	R0904903-021	tocl	Sample	2	1.000	0	1.00	No	
44	R0905046-002	tocl	Sample	2	1.000	0	1.00	No	

Analyst: C. Schrader

Pipets: TOC/TOX WAYNE

****
** SEQUENCE **
****

091509 Tue Sep 15 13:09:04 2009

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
45	R0905046-003	toc1	Sample	2	1.000	0	1.00	No	
46	R0905046-004	toc1	Sample	2	1.000	0	1.00	No	
47	R0905046-005	toc1	Sample	2	1.000	0	1.00	No	
48	R0904939-001	toc1	Sample	2	1.000	0	1.00	No	
49	CCV	toc1	Chk. 5	2	1.000	0	1.00	No	
50	CCB	toc1	Chk. 5	2	1.000	0	1.00	No	

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

OI Analytical Model 1010

TOC by EPA 415.1 / 9060 / SM20 5310 C

Sample Information:

Sample #:	1
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915001.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	14:48	12939	15.348	14.974
2	14:56	13230	15.701	15.318
3	15:04	13555	16.096	15.704
4	15:13	13656	16.219	15.823
	Avg.	13345	15.841	15.455
	Std. Dev	326.03		
	RSD (%)	2.44		

OK
CS
9/16/09

Report generrated by OI Analytical's TOC Reporter V5.0, using WinToc 1010 V5.0 and 1010 Firmware V5.0

'*' = modified '~' = unused

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	2
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915002.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	15:22	222	-0.097	-0.095
2	15:30	225	-0.094	-0.091
3	15:38	250	-0.063	-0.062
4	15:48	254	-0.058	-0.057
	Avg.	238	-0.078	-0.076
	Std. Dev	16.58		
	RSD (%)	6.97		

OK
CS
9/16/09

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	3
Sample Name:	LCS
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915003.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	15:56	8063	9.426	9.196
2	16:05	8276	9.685	9.448
3	16:13	8929	10.478	10.222
4	16:22	8869	10.405	10.151
	Avg.	8534	9.998	9.754
	Std. Dev	430.76		
	RSD (%)	5.05		

OK
CS
9/16/09

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	4
Sample Name:	MB-8042
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915004.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	16:31	432	0.254	0.248
2	16:39	403	0.219	0.213
3	16:47	536	0.380	0.371
4	16:56	450	0.276	0.269
	Avg.	455	0.282	0.275
	Std. Dev	57.21		
	RSD (%)	12.57		

OK
CS
9/16/09

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	5
Sample Name:	MB-8043
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915005.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	17:05	413	0.231	0.225
2	17:13	442	0.266	0.259
3	17:21	443	0.267	0.261
4	17:31	493	0.328	0.320
	Avg.	448	0.273	0.266
	Std. Dev	33.22		
	RSD (%)	7.42		

OK
CS
9/16/09

SSRC05

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	6
Sample Name:	R0904817-001
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915006.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	17:40	585	0.440	0.429
2	17:48	665	0.537	0.524
3	17:56	624	0.487	0.475
4	18:05	587	0.442	0.431
	Avg.	615	0.476	0.465
	Std. Dev	37.70		
	RSD (%)	6.13		

OK
CS
9/16/09

Columbia Analytical Srvcs.
1 Mustard Street
Rochester, NY. 14609
585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	7
Sample Name:	R0904817-002
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915007.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	18:14	618	0.480	0.468
2	18:22	703	0.583	0.569
3	18:30	592	0.448	0.437
4	18:40	628	0.492	0.480
	Avg.	635	0.501	0.488
	Std. Dev	47.65		
	RSD (%)	7.50		

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Sample Information:

Sample #:	8
Sample Name:	R0904739-003
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	4

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915008.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	18:48	803	0.704	0.687
2	18:58	1019	0.967	0.943
	Avg.	911	0.836	0.815
	Std. Dev	152.74		
	RSD (%)	16.77		

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Sample Information:

Sample #:	9
Sample Name:	R0904739-007
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	4

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915009.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:07	780	0.676	0.660
2	19:16	966	0.902	0.880
	Avg.	873	0.789	0.770
	Std. Dev	131.52		
	RSD (%)	15.07		

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Sample Information:

Sample #:	10
Sample Name:	R0904739-008
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	4

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915010.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:25	1179	1.161	1.133
2	19:34	1449	1.489	1.453
	Avg.	1314	1.325	1.293
	Std. Dev	190.92		
	RSD (%)	14.53		

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Sample Information:

Sample #:	11
Sample Name:	R0904739-012
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	4

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915011.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:43	771	0.666	0.649
2	19:52	1026	0.975	0.951
	Avg.	899	0.820	0.800
	Std. Dev	180.31		
	RSD (%)	20.07		

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Sample Information:

Sample #:	12
Sample Name:	R0904880-003
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	4

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915012.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:01	7275	8.565	8.356
2	20:10	7425	8.747	8.534
	Avg.	7350	8.656	8.445
	Std. Dev	106.07		
	RSD (%)	1.44		

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Sample Information:

Sample #:	13
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915013.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:19	12818	15.201	14.830
2	20:27	13514	16.046	15.655
3	20:35	13947	16.572	16.168
4	20:45	13982	16.615	16.210
	Avg.	13565	16.109	15.716
	Std. Dev	541.73		
	RSD (%)	3.99		

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Sample Information:

Sample #:	14
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915014.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:53	198	-0.126	-0.123
2	21:02	265	-0.045	-0.044
3	21:10	210	-0.112	-0.109
4	21:19	214	-0.107	-0.104
	Avg.	222	-0.097	-0.095
	Std. Dev	29.62		
	RSD (%)	13.36		

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Sample Information:

Sample #:	15
Sample Name:	R0904903-001
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915015.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	21:28	4522	5.221	5.094
2	21:37	4752	5.501	5.366
	Avg.	4637	5.361	5.230
	Std. Dev	162.63		
	RSD (%)	3.51		

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Sample Information:

Sample #:	16
Sample Name:	R0904903-001DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915016.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	21:46	4437	5.118	4.993
2	21:55	4684	5.418	5.286
	Avg.	4561	5.268	5.140
	Std. Dev	174.66		
	RSD (%)	3.83		

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Sample Information:

Sample #:	17
Sample Name:	R0904903-001SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915017.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:04	13363	15.959	15.570
2	22:13	12743	15.206	14.835
	Avg.	13053	15.582	15.202
	Std. Dev	438.41		
	RSD (%)	3.36		

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Sample Information:

Sample #:	18
Sample Name:	R0904903-002
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915018.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:22	4860	5.632	5.494
2	22:31	4901	5.682	5.543
	Avg.	4881	5.657	5.519
	Std. Dev	28.99		
	RSD (%)	0.59		

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Sample Information:

Sample #:	19
Sample Name:	R0904903-004
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915019.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:40	4610	5.328	5.198
2	22:50	4709	5.448	5.315
	Avg.	4660	5.388	5.257
	Std. Dev	70.00		
	RSD (%)	1.50		

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Sample Information:

Sample #:	20	Operator Name:	Unknown	Method Name:	toc1
Sample Name:	R0904903-005	Sample Volume (ml):	1.025	Sequence Name:	091509
Run Type:	SAMPLE	Loop Volume (ml):	1.025	Calibration Name:	081809rl
Analysis Mode:	TICTOC	Loop Size (ml):	1.000	PAM Mode:	OFF
Total Reps:	2	Sample Intro:	AUTOSAMPLER	PAM Volume (ul):	0
Date:	15Sep2009	Remote Start:	OFF	PAM Purge (min:sec):	0:30
Dilution Factor:	1.00	File Name:	0915020.rlt		
Comments:					

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:58	2931	3.289	3.209
2	23:08	2665	2.966	2.894
	Avg.	2798	3.127	3.051
	Std. Dev	188.09		
	RSD (%)	6.72		

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Sample Information:

Sample #:	21
Sample Name:	R0904903-005DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915021.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:16	2476	2.736	2.670
2	23:26	2607	2.895	2.825
	Avg.	2542	2.816	2.747
	Std. Dev	92.63		
	RSD (%)	3.64		

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Sample Information:

Sample #:	22
Sample Name:	R0904903-005SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915022.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:34	10893	12.959	12.643
2	23:44	11289	13.440	13.112
	Avg.	11091	13.200	12.878
	Std. Dev	280.01		
	RSD (%)	2.52		

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Sample Information:

Sample #:	23
Sample Name:	R0904903-006
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	15Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915023.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:53	4496	5.190	5.063
2	00:02	4758	5.508	5.374
	Avg.	4627	5.349	5.218
	Std. Dev	185.26		
	RSD (%)	4.00		

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Sample Information:

Sample #:	24
Sample Name:	R0904903-008
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915024.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:11	5272	6.132	5.983
2	00:20	5164	6.001	5.855
	Avg.	5218	6.067	5.919
	Std. Dev	76.37		
	RSD (%)	1.46		

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Sample Information:

Sample #:	25
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915025.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:29	13099	15.542	15.163
2	00:38	13396	15.903	15.515
	Avg.	13248	15.723	15.339
	Std. Dev	210.01		
	RSD (%)	1.59		

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Sample Information:

Sample #:	26
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915026.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:47	142	-0.194	-0.190
2	00:56	180	-0.148	-0.145
	Avg.	161	-0.171	-0.167
	Std. Dev	26.87		
	RSD (%)	16.69		

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Sample Information:

Sample #:	27
Sample Name:	LCS
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915027.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:05	8590	10.066	9.821
2	01:14	8817	10.342	10.089
	Avg.	8704	10.204	9.955
	Std. Dev	160.51		
	RSD (%)	1.84		

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Sample Information:

Sample #:	28
Sample Name:	R0904903-009
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915028.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:23	10387	12.344	12.043
2	01:32	10663	12.680	12.370
	Avg.	10525	12.512	12.207
	Std. Dev	195.16		
	RSD (%)	1.85		

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Sample Information:

Sample #:	29
Sample Name:	R0904903-010
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915029.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:41	5747	6.709	6.545
2	01:51	5889	6.882	6.714
	Avg.	5818	6.795	6.630
	Std. Dev	100.41		
	RSD (%)	1.73		

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Sample Information:

Sample #:	30
Sample Name:	R0904903-010DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915030.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:59	5793	6.765	6.600
2	02:09	5846	6.829	6.663
	Avg.	5820	6.797	6.631
	Std. Dev	37.48		
	RSD (%)	0.64		

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Sample Information:

Sample #:	31
Sample Name:	R0904903-010SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915031.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	02:17	13745	16.423	16.022
2	02:27	14985	17.929	17.492
	Avg.	14365	17.176	16.757
	Std. Dev	876.81		
	RSD (%)	6.10		

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Sample Information:

Sample #:	32
Sample Name:	R0904903-011
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915032.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	02:35	4877	5.652	5.515
2	02:45	4887	5.665	5.526
	Avg.	4882	5.658	5.520
	Std. Dev	7.07		
	RSD (%)	0.14		

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Sample Information:

Sample #:	33
Sample Name:	R0904903-012
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915033.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	02:54	6211	7.273	7.095
2	03:03	6086	7.121	6.947
	Avg.	6149	7.197	7.021
	Std. Dev	88.39		
	RSD (%)	1.44		

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Sample Information:

Sample #:	34
Sample Name:	R0904903-014
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915034.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	03:12	4121	4.734	4.619
2	03:21	4244	4.884	4.765
	Avg.	4183	4.809	4.692
	Std. Dev	86.97		
	RSD (%)	2.08		

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Sample Information:

Sample #:	35
Sample Name:	R0904903-015
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915035.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	03:30	6512	7.638	7.452
2	03:39	6330	7.417	7.236
	Avg.	6421	7.528	7.344
	Std. Dev	128.69		
	RSD (%)	2.00		

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Sample Information:

Sample #:	36
Sample Name:	R0904903-017
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915036.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	03:48	5792	6.764	6.599
2	03:57	4776	5.530	5.395
	Avg.	5284	6.147	5.997
	Std. Dev	718.42		
	RSD (%)	13.60		

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Sample Information:

Sample #:	37
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915037.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	04:06	13030	15.459	15.082
2	04:15	13305	15.793	15.407
	Avg.	13168	15.626	15.244
	Std. Dev	194.45		
	RSD (%)	1.48		

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Sample Information:

Sample #:	38
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915038.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	04:24	223	-0.096	-0.094
2	04:33	264	-0.046	-0.045
	Avg.	244	-0.071	-0.069
	Std. Dev	28.99		
	RSD (%)	11.91		

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Sample Information:

Sample #:	39
Sample Name:	R0904903-018
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915039.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	04:42	4877	5.652	5.515
2	04:51	4863	5.635	5.498
	Avg.	4870	5.644	5.506
	Std. Dev	9.90		
	RSD (%)	0.20		

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Sample Information:

Sample #:	40
Sample Name:	R0904903-020
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915040.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:00	8321	9.835	9.595
2	05:10	8576	10.145	9.898
	Avg.	8449	9.990	9.746
	Std. Dev	180.31		
	RSD (%)	2.13		

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Sample Information:

Sample #:	41
Sample Name:	R0904903-020DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915041.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:18	8721	10.321	10.069
2	05:28	8643	10.226	9.977
	Avg.	8682	10.274	10.023
	Std. Dev	55.15		
	RSD (%)	0.64		

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Sample Information:

Sample #:	42
Sample Name:	R0904903-020SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915042.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:36	16232	19.443	18.969
2	05:46	17133	20.538	20.037
	Avg.	16683	19.991	19.503
	Std. Dev	637.10		
	RSD (%)	3.82		

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Sample Information:

Sample #:	43
Sample Name:	R0904903-021
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915043.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:54	5759	6.724	6.560
2	06:04	5992	7.007	6.836
	Avg.	5876	6.865	6.698
	Std. Dev	164.76		
	RSD (%)	2.80		

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Sample Information:

Sample #:	44
Sample Name:	R0905046-002
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915044.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	06:13	12577	15.004	14.638
2	06:22	14182	16.954	16.540
	Avg.	13380	15.979	15.589
	Std. Dev	1134.91		
	RSD (%)	8.48		

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Sample Information:

Sample #:	45
Sample Name:	R0905046-003
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915045.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	06:31	3795	4.338	4.232
2	06:40	4409	5.084	4.960
	Avg.	4102	4.711	4.596
	Std. Dev	434.16		
	RSD (%)	10.58		

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Sample Information:

Sample #:	46
Sample Name:	R0905046-004
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915046.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	06:49	14680	17.558	17.130
2	06:58	16426	19.679	19.199
	Avg.	15553	18.619	18.165
	Std. Dev	1234.61		
	RSD (%)	7.94		

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Sample Information:

Sample #:	47
Sample Name:	R0905046-005
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915047.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	07:07	4340	5.000	4.878
2	07:17	5562	6.484	6.326
	Avg.	4951	5.742	5.602
	Std. Dev	864.08		
	RSD (%)	17.45		

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Sample Information:

Sample #:	48
Sample Name:	R0904939-001
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915048.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	07:25	28522	34.370	33.532
2	07:35	29223	35.221	34.362
	Avg.	28873	34.796	33.947
	Std. Dev	495.68		
	RSD (%)	1.72		

RPT @ ½
CS
9/16/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	49
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915049.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	07:44	14701	17.488	17.061
2	07:53	13723	16.300	15.903
	Avg.	14212	16.894	16.482
	Std. Dev	691.55		
	RSD (%)	4.87		

11+1.

OK
CS
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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	50
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	16Sep2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0915050.rlt

Method Name:	toc1
Sequence Name:	091509
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	08:02	240	-0.075	-0.073
2	08:11	318	0.019	0.019
	Avg.	279	-0.028	-0.027
	Std. Dev	55.15		
	RSD (%)	19.77		

OK
CS
9/16/09

Columbia Analytical Services
1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: C. Schrader Date: 9/15/09

Analysis: Total Organic Carbon, 415.1/9060 Instrument: OI Analytical Model1010 TOC Analyzer
High Level: 1.0 to 30.0 ppm

Quality Control:

	Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC86012B, 08/18/09	WC86010B, 05/05/09				
b) I/CCV Preparation:	WC86012E, 08/18/09	WC86010A, 05/05/09	3.0	1000	200	15.00
c) LCS Preparation:	WC86012C, 08/18/09	WC86010B, 05/05/09	1.0	1000	100	10.00
d) Matrix Spike Prep.:	WC86012D, 08/18/09	WC86010B, 05/05/09	0.42	1000	42	10.00

Instrument log filled in? (Y) (N)

Comments:
Curve Date = 08/18/09

Note: Dilutions greater than 1/1 are placed in the "comments" section of the Model 1010 Analyzer report.
The "Dilution Factor" on the Model 1010 will always read "1.00"
TOC results on the Model 1010 Analyzer reports do not include the dilution factor.
Final results on the Starlims run and final report include the dilution factor.

****
** SEQUENCE **
****

081809RL Tue Aug 18 17:43:10 2009

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
1	BLANK	blk	Sample	4	1.000	15	1.00	No	
2	BLANK	blk	Sample	4	1.000	8	1.00	No	
3	BLANK	tocl	Sample	4	1.000	0	1.00	No	
4	0.00 STD	tocl	Std. 1	4	1.000	0	1.00	No	
5	1.00 STD	tocl	Std. 2	4	1.000	0	1.00	No	
6	5.00 STD	tocl	Std. 3	4	1.000	0	1.00	No	
7	10.00 STD	tocl	Std. 4	4	1.000	0	1.00	No	
8	30.00 STD	tocl	Std. 5	4	1.000	0	1.00	No	
9	ICV	tocl	Chk. 5	4	1.000	0	1.00	No	
10	ICB	tocl	Chk. 5	4	1.000	0	1.00	No	
11	LCS	tocl	Chk. 5	4	1.000	0	1.00	No	
12	MDL 1 TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
13	MDL 2 TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
14	MDL 3 TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
15	MDL 4 TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
16	MDL 5 TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
17	MDL 6 TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
18	MDL 7 TV= 0.500	tocl CS 8/19/09	Sample	4	1.000	0	1.00	No	
19	LOD TV= 0.500	tocl	Sample	4	1.000	0	1.00	No	
20	LOD TV= ~~0.500~~ 0.200	tocl	Sample	4	1.000	0	1.00	No	
21	CCV	tocl	Chk. 5	4	1.000	0	1.00	No	
22	CCB 8/19/09	tocl	Chk. 5	4	1.000	0	1.00	No	

Analyst: C. Schrader

Pipets: Spiderman
Wonder Woman

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OI Analytical Model 1010

TOC by EPA 415.1 / 9060 / SM20 5310 C

Sample Information:

Sample #:	1	Operator Name:	Unknown	Method Name:	blk
Sample Name:	BLANK	Sample Volume (ml):	1.025	Sequence Name:	081809rl
Run Type:	BLANK	Loop Volume (ml):	1.025	Calibration Name:	081809rl
Analysis Mode:	TICTOC	Loop Size (ml):	1.000	PAM Mode:	OFF
Total Reps:	15	Sample Intro:	AUTOSAMPLER	PAM Volume (ul):	0
Date:	18Aug2009	Remote Start:	OFF	PAM Purge (min:sec):	0:30
Dilution Factor:	1.00	File Name:	0818001.rlt		
Comments:					

Sample Results:

Rep #	Time		TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	17:50	*	377	0.518	0.505
2	17:55	*	255	0.351	0.342
3	18:01	*	219	0.302	0.294
4	18:06	*	266	0.366	0.357
5	18:12	*	329	0.452	0.441
6	18:18	*	310	0.426	0.416
7	18:23	*	326	0.448	0.437
8	18:29	*	218	0.300	0.293
9	18:35	*	248	0.341	0.333
10	18:40	*	222	0.306	0.298
11	18:46	*	215	0.296	0.289
12	18:51	*	225	0.310	0.302
13	18:57	*	230	0.317	0.309
14	19:03	*	235	0.323	0.316
15	19:10	*	231	0.318	0.310
	Avg.		260	0.358	0.350
	Std. Dev		50.72		
	RSD (%)		19.48		

Reagent blanks
OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	2	Operator Name:	Unknown	Method Name:	blk
Sample Name:	BLANK	Sample Volume (ml):	1.025	Sequence Name:	081809rl
Run Type:	SAMPLE	Loop Volume (ml):	1.025	Calibration Name:	081809rl
Analysis Mode:	TICTOC	Loop Size (ml):	1.000	PAM Mode:	OFF
Total Reps:	4	Sample Intro:	AUTOSAMPLER	PAM Volume (ul):	0
Date:	18Aug2009	Remote Start:	OFF	PAM Purge (min:sec):	0:30
Dilution Factor:	1.00	File Name:	0818002.rlt		
Comments:					

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:17	333	0.138	0.135
2	19:22	209	-0.032	-0.031
3	19:28	196	-0.049	-0.048
4	19:36	209	-0.032	-0.031
	Avg.	237	0.007	0.006
	Std. Dev	64.46		
	RSD (%)	27.23		

Water blank
OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	3	Operator Name:	Unknown	Method Name:	blk
Sample Name:	BLANK	Sample Volume (ml):	1.025	Sequence Name:	081809rl
Run Type:	BLANK	Loop Volume (ml):	1.025	Calibration Name:	081809rl
Analysis Mode:	TICTOC	Loop Size (ml):	1.000	PAM Mode:	OFF
Total Reps:	8	Sample Intro:	AUTOSAMPLER	PAM Volume (ul):	0
Date:	18Aug2009	Remote Start:	OFF	PAM Purge (min:sec):	0:30
Dilution Factor:	1.00	File Name:	0818003.rlt		
Comments:					

Sample Results:

Rep #	Time		TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:42	*	259	0.356	0.348
2	19:48	*	250	0.344	0.336
3	19:53	*	233	0.321	0.313
4	19:59	*	262	0.360	0.352
5	20:04	*	248	0.341	0.333
6	20:10	*	255	0.351	0.342
7	20:16	*	214	0.295	0.288
8	20:23	*	200	0.276	0.269
	Avg.		240	0.331	0.322
	Std. Dev		22.55		
	RSD (%)		9.39		

Reagent blanks
OK
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Sample Information:

Sample #:	4
Sample Name:	BLANK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818004.rlt

Method Name:	blk
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:30	278	0.075	0.074
2	20:35	177	-0.063	-0.062
3	20:41	237	0.019	0.019
4	20:49	160	-0.086	-0.084
	Avg.	213	-0.014	-0.013
	Std. Dev	54.49		
	RSD (%)	25.58		

Water blank
OK
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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	5	Operator Name:	Unknown	Method Name:	toc1
Sample Name:	BLANK	Sample Volume (ml):	1.025	Sequence Name:	081809rl
Run Type:	SAMPLE	Loop Volume (ml):	1.025	Calibration Name:	081809rl
Analysis Mode:	TICTOC	Loop Size (ml):	1.000	PAM Mode:	OFF
Total Reps:	4	Sample Intro:	AUTOSAMPLER	PAM Volume (ul):	0
Date:	18Aug2009	Remote Start:	OFF	PAM Purge (min:sec):	0:30
Dilution Factor:	1.00	File Name:	0818005.rlt		
Comments:					

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:58	296	0.100	0.098
2	21:06	296	0.100	0.098
3	21:14	286	0.086	0.084
4	21:23	267	0.060	0.059
	Avg.	286	0.087	0.085
	Std. Dev	13.67		
	RSD (%)	4.78		

Water blank
OK
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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	6
Sample Name:	0.00 STD
Run Type:	STD 1
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818006.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	21:32	238	0.000	0.000
2	21:40	295	0.000	0.000
3	21:49	295	0.000	0.000
4	21:58	260	0.000	0.000
	Avg.	272	0.000	0.000
	Std. Dev	28.04		
	RSD (%)	10.31		

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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	7
Sample Name:	1.00 STD
Run Type:	STD 2
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818007.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:07	1094	1.025	1.000
2	22:15	1030	1.025	1.000
3	22:23	1079	1.025	1.000
4	22:32	1132	1.025	1.000
	Avg.	1084	1.025	1.000
	Std. Dev	42.21		
	RSD (%)	3.89		

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Sample Information:

Sample #:	8
Sample Name:	5.00 STD
Run Type:	STD 3
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818008.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:41	4391	5.125	5.000
2	22:49	4589	5.125	5.000
3	22:57	4771	5.125	5.000
4	23:07	4693	5.125	5.000
	Avg.	4611	5.125	5.000
	Std. Dev	164.53		
	RSD (%)	3.57		

OK
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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	9
Sample Name:	10.00 STD
Run Type:	STD 4
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818009.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:16	8591	10.250	10.000
2	23:24	8882	10.250	10.000
3	23:32	8965	10.250	10.000
4	23:41	8927	10.250	10.000
	Avg.	8841	10.250	10.000
	Std. Dev	170.25		
	RSD (%)	1.93		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	10
Sample Name:	30.00 STD
Run Type:	STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818010.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:50	23659	30.750	30.000
2	23:58	25783	30.750	30.000
3	00:06	26255	30.750	30.000
4	00:16	26397	30.750	30.000
	Avg.	25524	30.750	30.000
	Std. Dev	1270.41		
	RSD (%)	4.98		

OK
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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	11
Sample Name:	ICV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818011.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:24	13002	15.425	15.048
2	00:32	13583	16.130	15.737
3	00:41	13434	15.949	15.560
4	00:50	13494	16.022	15.631
	Avg.	13378	15.882	15.494
	Std. Dev	258.19		
	RSD (%)	1.93		

OK
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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	12
Sample Name:	ICB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818012.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:59	230	-0.087	-0.085
2	01:07	190	-0.136	-0.133
3	01:15	239	-0.077	-0.075
4	01:24	196	-0.129	-0.126
	Avg.	214	-0.107	-0.105
	Std. Dev	24.36		
	RSD (%)	11.40		

OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	13
Sample Name:	LCS
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818013.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:33	8506	9.964	9.721
2	01:41	8454	9.901	9.659
3	01:49	8741	10.249	9.999
4	01:59	9089	10.672	10.412
	Avg.	8698	10.197	9.948
	Std. Dev	289.33		
	RSD (%)	3.33		

OK
CS
8/19/09

5/5/09 CS

(A) TOC Reference Stock (1000 ppm)
2.128 g KHP (WC~~8~~80626) previously dried @ 104 °C for 2 hours, → 1000 mL w/ UPDI. Store @ RT in amber glass.
Exp. 1 yr., ~~5/5/09~~ 5/5/10

(B) TOC Standard Stock (1000 ppm)
2.128 g KHP ~~(WC8500)~~ (WC~~8~~8076G), previously dried @ 104 °C for 2 hours, → 1000 mL w/ UPDI. Store @ RT in amber glass.
Exp. 1 yr. 5/5/10.

(C) TOC High Level Calibration for OI Model 1010
Standards - fresh per calibration

Conc. (mg/L)	mLs 1000 ppm (WC~~8~~6010B)	Final vol. w/ UPDI
0.00	0.00	100
1.00	0.10	100
5.00	0.50	100
10.00	1.00	100
30.00	3.00	100

(D) TOC High Level LCS TV = 10.0 mg/L fresh per run
1.0 mL 1000 ppm Std stock (WC~~8~~6010B) diluted volumetrically to 100 mL w/ UPDI.

Continued on Page

7/2/09 (E)(A) Matrix Spike - Add 20 mL of 10000 ppm CS 7/2/09 Standard stock (WC86008B) to sample and andlyze. TV = $\frac{(20\ mL)(10000\ ppm)}{(X\ g\ sample)}$

8/18/09 (B) TOC High Level Calibration for OI Model 1010

CS Standards - fresh per calibration

Conc. (mg/L)	mLs 1000ppm (WC86010B)	Final vol w/ UPDI (mL)
0.00	0.000	100
1.00	0.100	100
5.00	0.500	100
10.00	1.000	100
30.00	3.000	100

(C) TOC High Level LCS, TV = 10.0 mg/L fresh per run. 1.0 mL 1000 ppm Std stock (WC86010B), Diluted volumetrically to 100 mL w/ UPDI

(D) TOC High level MS. TV = 10.0 mg/L, Add 0.420 mL 1000 ppm std. stock (WC86010B) to 42 mL in sample volume.

(E) TOC High Level ICV/CCV TV = 15.0 mg/L, fresh per ru 3.0 mL 1000 ppm Ref. Stock (WC86010A) dilute to 200 mL volumetrically w/ UPDI.

Continued on Page

Read and Understood By

SD 8/18/09

Signed Date Signed Date

****
** CALIBRATION **
****

081809RL Wed Aug 19 00:16:03 2009

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	0.000	1.000
2	Yes	1.000	1.000
3	Yes	5.000	1.000
4	Yes	10.000	1.000
5	Yes	30.000	1.000

RF (ugC/k-cts):	1.215
R-Squared:	0.9970
Offset (cts):	301
Offset (ugC):	-0.367
Calibration Mode:	TOC
Allow Editing:	No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	238	1094	4391	8591	23659
2	295	1030	4589	8882	25783
3	295	1079	4771	8965	26255
4	260	1132	4693	8927	26397
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

Analytical Results Summary

Instrument Name: R-IC-01 **Analyst:** RPAWL **Analysis Lot:** 168760 **Method/Testcode:** 7199/Cr6

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908149-01	Chromium, Hexavalent	MB		Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 09:44:43	N	IV
RQ0908149-07	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 09:44:43	N	IV
RQ0908149-07	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 09:44:43	N	IV
RQ0908149-02	Chromium, Hexavalent	LCS		Water	0.20 mg/L	10 mL	0.196 mg/L	1	0.010	98		9/1/09 09:55:07	N	IV
RQ0908149-08	Chromium, Hexavalent	LCS		Soil	0.20 mg/L		0.196 mg/L	1	0.010	98		9/1/09 09:55:07	N	IV
RQ0908149-02	Chromium, Hexavalent	LCS		Water	0.19 mg/L	10 mL	0.189 mg/L	1	0.010	94		9/1/09 10:05:32	N	IV
RQ0908149-08	Chromium, Hexavalent	LCS		Soil	0.19 mg/L		0.189 mg/L	1	0.010	94		9/1/09 10:05:32	N	IV
R0904948-006	Chromium, Hexavalent	N/A		Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 10:15:57	N	IV
R0904948-006	Chromium, Hexavalent	N/A		Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 10:26:21	N	IV
RQ0908149-05	Chromium, Hexavalent	DUP	R0904948-006	Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010		NC	9/1/09 10:36:46	N	IV
RQ0908149-05	Chromium, Hexavalent	DUP	R0904948-006	Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010		NC	9/1/09 10:47:10	N	IV
RQ0908149-06	Chromium, Hexavalent	MS	R0904948-006	Water	0.19 mg/L	10 mL	0.194 mg/L	1	0.010	97		9/1/09 10:57:34	N	IV
RQ0908149-06	Chromium, Hexavalent	MS	R0904948-006	Water	0.19 mg/L	10 mL	0.193 mg/L	1	0.010			9/1/09 11:07:59	N	IV
RQ0908042-01	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 13:30:27	N	IV
RQ0908042-01	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 13:40:50	N	IV
R0904817-001	Chromium, Hexavalent	N/A		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 13:51:15	N	IV
R0904817-001	Chromium, Hexavalent	N/A		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 14:01:38	N	IV
RQ0908149-03	Chromium, Hexavalent	DUP	R0904817-001	Soil	0.00 mg/L		0.010 mg/L U	1	0.010		NC	9/1/09 14:12:03	N	IV
RQ0908149-03	Chromium, Hexavalent	DUP	R0904817-001	Soil	0.00 mg/L		0.010 mg/L U	1	0.010		NC	9/1/09 14:22:28	N	IV
RQ0908149-04	Chromium, Hexavalent	MS	R0904817-001	Soil	0.21 mg/L		0.210 mg/L	1	0.010	105		9/1/09 14:32:52	N	IV
RQ0908149-04	Chromium, Hexavalent	MS	R0904817-001	Soil	0.19 mg/L		0.194 mg/L	1	0.010			9/1/09 14:43:17	N	IV
RQ0908043-01	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 14:53:40	N	IV
RQ0908043-01	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 15:04:04	N	IV

Analytical Results Summary

Instrument Name: R-IC-01 **Analyst:** RPAWL **Analysis Lot:** 168772 **Method/Testcode:** 7199/Cr6 SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908158-01	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 15:24:53	N	IV
RQ0908158-01	Chromium, Hexavalent	MB		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 15:24:53	N	IV
RQ0908158-02	Chromium, Hexavalent	LCS		Soil	0.19 mg/L		0.189 mg/L	1	0.010	95		9/1/09 15:35:18	N	IV
RQ0908158-02	Chromium, Hexavalent	LCS		Soil	0.18 mg/L		0.183 mg/L	1	0.010	91*		9/1/09 15:45:42	N	IV
R0904817-002	Chromium, Hexavalent	N/A		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 15:56:07	N	IV
R0904817-002	Chromium, Hexavalent	N/A		Soil	0.00 mg/L		0.010 mg/L U	1	0.010			9/1/09 16:06:32	N	IV

Schedule File: J:\ACQUDATA\IC\SCHEDULE\IC#1\As-7\As7-090109.sch

Line	Sample	Sample Type	Level	Method	Data File	Dilution	Comment
1	CCV	Sample		cr6-0811.met	901_001.dxd	1	
2	CCB	Sample		cr6-0811.met	901_002.dxd	1	
3	LCS	Sample		cr6-0811.met	901_003.dxd	1	
4	LCS	Sample		cr6-0811.met	901_004.dxd	1	REP
5	EB083109-SO1	Sample		cr6-0811.met	901_005.dxd	1	
6	EB083109-SO1	Sample		cr6-0811.met	901_006.dxd	1	REP
7	EB083109-SO1 DUP	Sample		cr6-0811.met	901_007.dxd	1	
8	EB083109-SO1 DUP	Sample		cr6-0811.met	901_008.dxd	1	REP
9	EB083109-SO1 SPK	Sample		cr6-0811.met	901_009.dxd	1	
10	EB083109-SO1 SPK	Sample		cr6-0811.met	901_010.dxd	1	REP
11	CCV	Sample		cr6-0811.met	901_011.dxd	1	
12	CCB	Sample		cr6-0811.met	901_012.dxd	1	
13	MB 8042-01	Sample		cr6-0811.met	901_013.dxd	1	
14	MB 8042-01	Sample		cr6-0811.met	901_014.dxd	1	REP
15	R0904817-001	Sample		cr6-0811.met	901_015.dxd	1	
16	R0904817-001	Sample		cr6-0811.met	901_016.dxd	1	REP
17	R0904817-001 DUP	Sample		cr6-0811.met	901_017.dxd	1	
18	R0904817-001 DUP	Sample		cr6-0811.met	901_018.dxd	1	REP
19	R0904817-001 SPK	Sample		cr6-0811.met	901_019.dxd	1	
20	R0904817-001 SPK	Sample		cr6-0811.met	901_020.dxd	1	REP
21	MB 8043-01	Sample		cr6-0811.met	901_021.dxd	1	
22	MB 8043-01	Sample		cr6-0811.met	901_022.dxd	1	REP
23	CCV	Sample		cr6-0811.met	901_023.dxd	1	
24	CCB	Sample		cr6-0811.met	901_024.dxd	1	
25	LCS	Sample		cr6-0811.met	901_025.dxd	1	
26	LCS	Sample		cr6-0811.met	901_026.dxd	1	REP
27	R0904817-002	Sample		cr6-0811.met	901_027.dxd	1	
28	R0904817-002	Sample		cr6-0811.met	901_028.dxd	1	REP
29	CCV	Sample		cr6-0811.met	901_029.dxd	1	
30	CCB	Sample		cr6-0811.met	901_030.dxd	1	

Default Method Path: J:\ACQUDATA\IC\METHOD.ACI\IC#1\CR6
Default Data Path: J:\ACQUDATA\IC\DATA\IC#1\CR6\090109
Comment:

9-1-09
#1

Analyst: R. Paul
C. Schrader

pipets: Ol' Blue
Lucy

R4817
R4948
2 copies

Reviewed & Approved
By: CL
Date: 9/8/09

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09
Received By: Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:32

Columbia Analytical Services
1 Mustard St., Suite 250
Rochester, NY 14609-0859

Analyst: RP

Date: 9/1/09

Hexavalent Chromium: **Method 218.6*** **Method 7199****

Folder Number	Sample ID	Sample pH at arrival	Date and Time pH check at arrival	Sample pH at analysis	Analysis Date
	EB083109-501	4.59	9/1/09 09:15	9.07	9/1/09
8042	01	10.54	9/1/09 13:00	9.49	9/1/09
4817	001	9.86	9/1/09 13:01	9.44	9/1/09
8043	01	10.81	9/1/09 13:04	9.50	9/1/09
4817	002	10.03	9/1/09 13:05	9.29	9/1/09
				RP 9/1/09	

*Note: Sample pH must be between 9.3 and 9.7 for 218.6

**Note: Sample pH must be between 9.0 and 9.5 for 7199

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\831_001.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 09:34:17

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

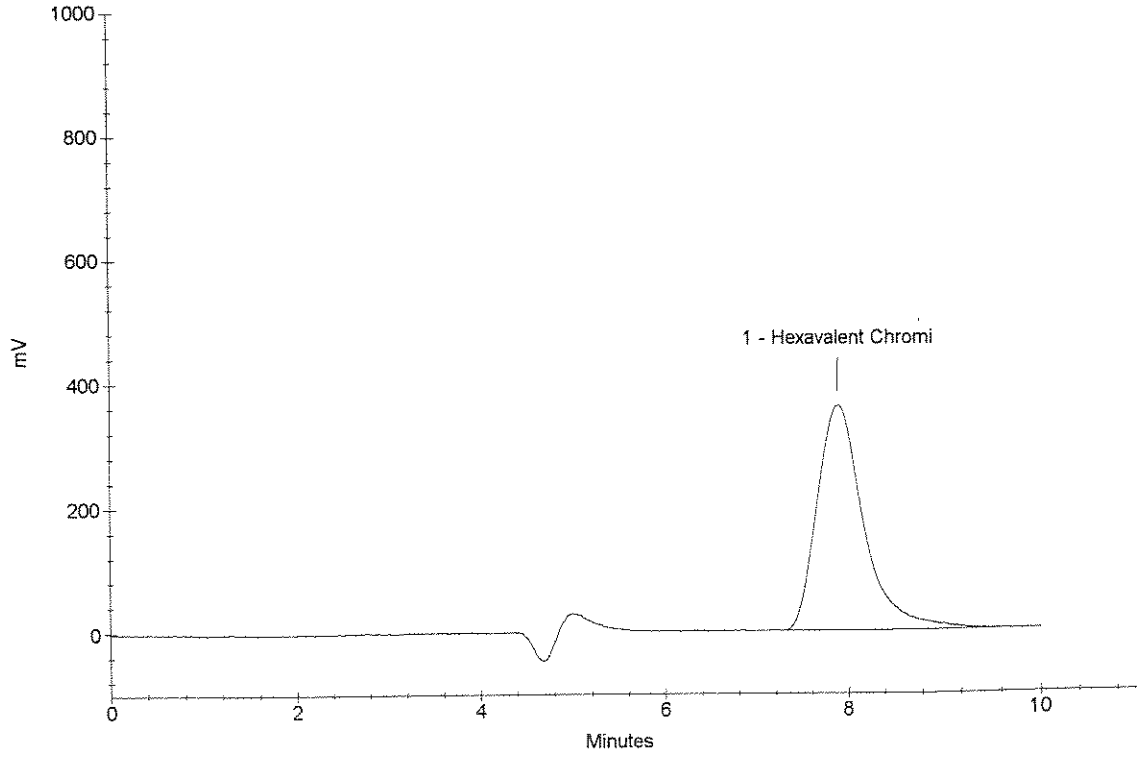
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	7.82	Hexavalent Chromi	0.5109	12783400

OK RP 9/2/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\831_002.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 09:44:43

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

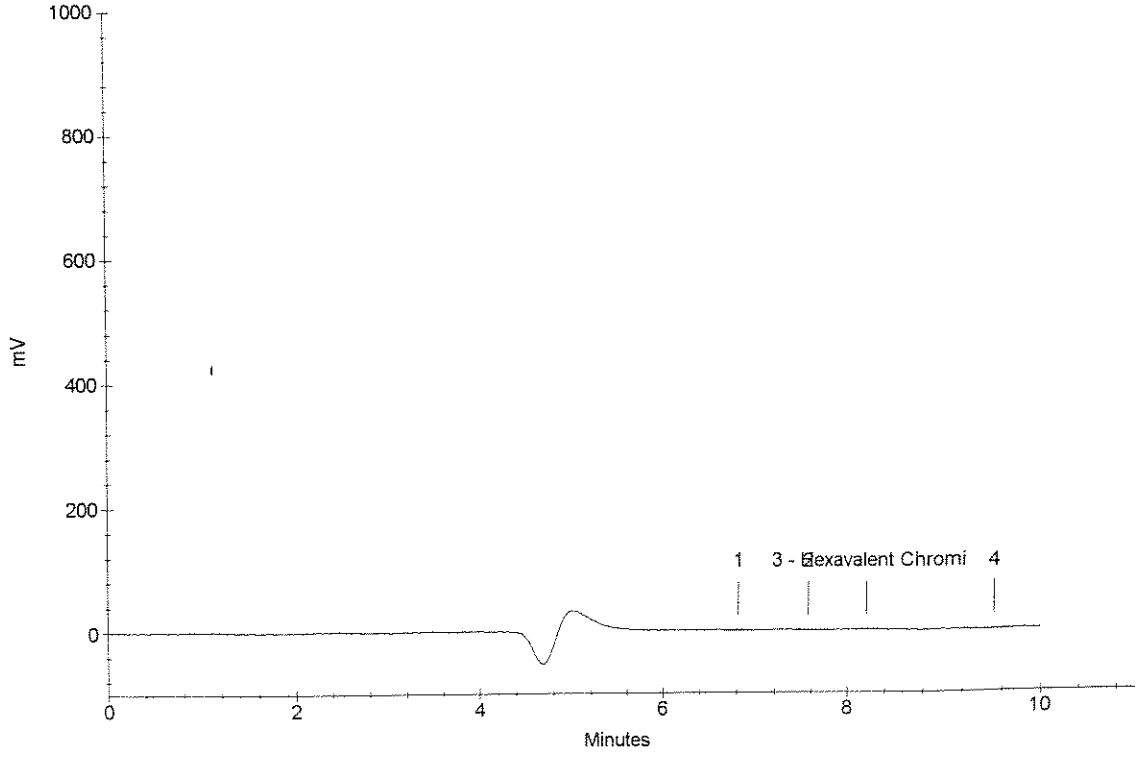
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
3	8.20	Hexavalent Chromi	-0.0011	23046

OK RP 9/2/09

CCB



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\831_003.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 09:55:07

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

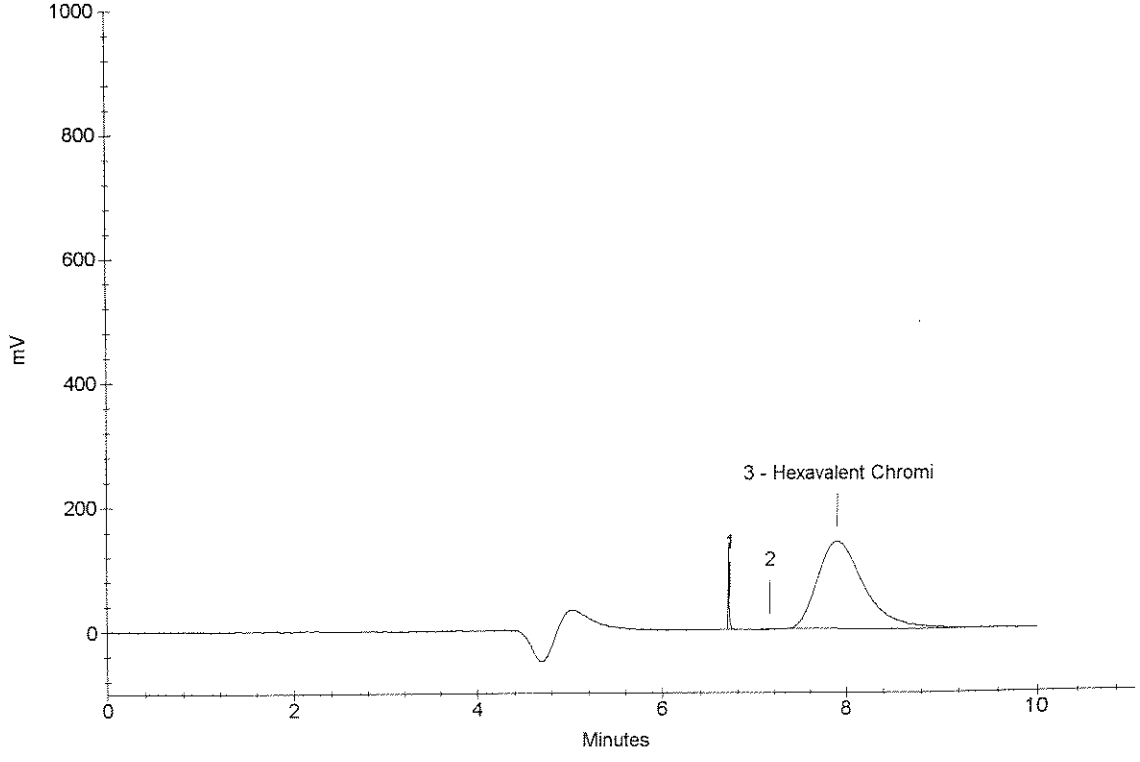
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
3	7.87	Hexavalent Chromi	0.1957	4927429

JK RR 9/2/09

LCS



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\831_004.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 10:05:32

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

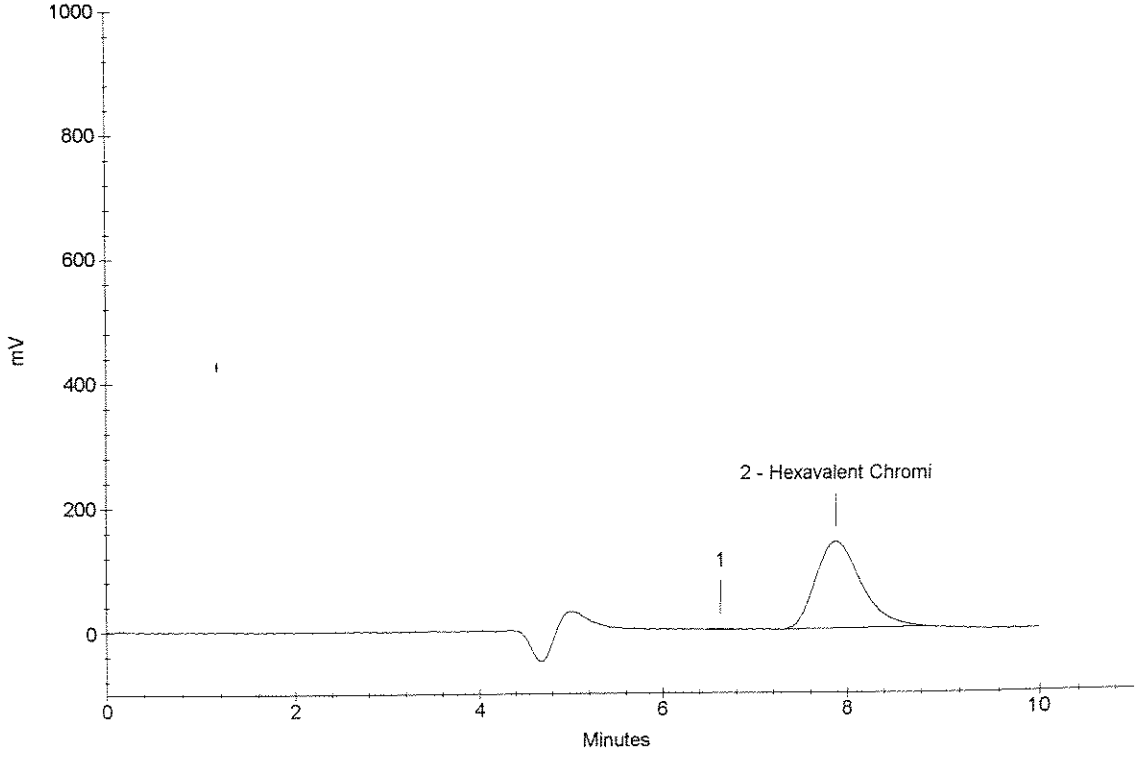
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.85	Hexavalent Chromi	0.1888	4756207

OK RP 9/2/09

LCS



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : EB083109-SO1 R804948-002
Data File Name : ...\831_005.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 10:15:57

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

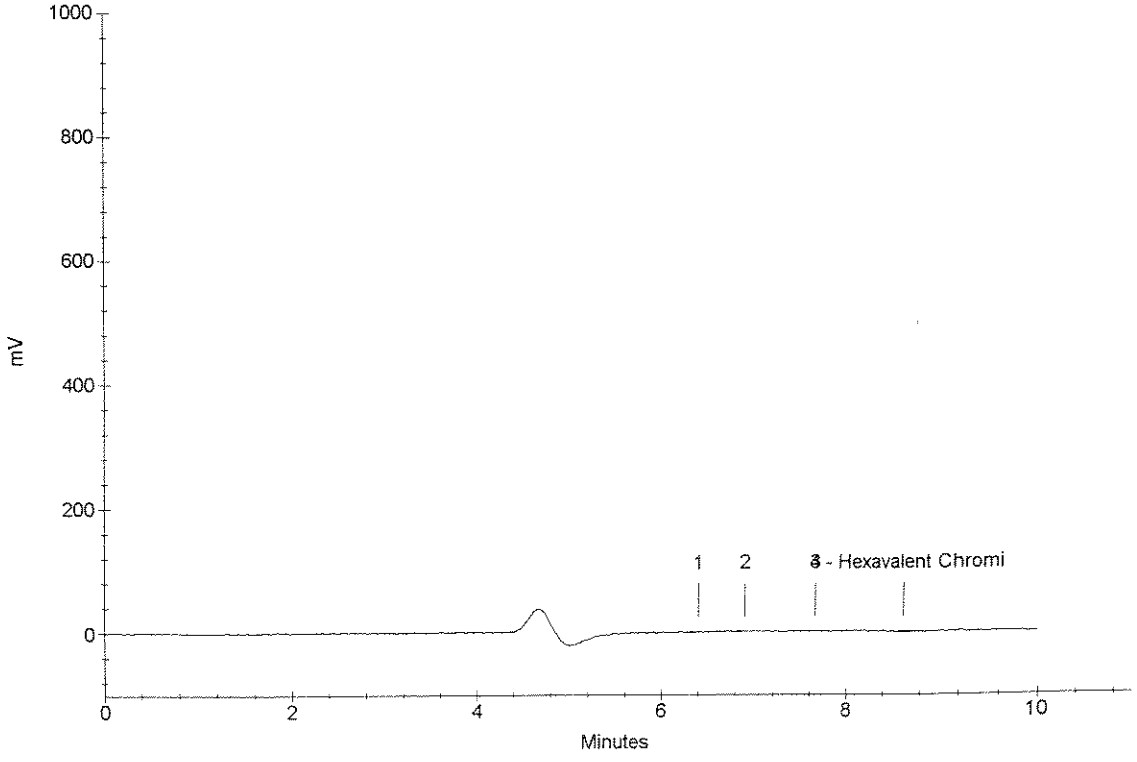
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
4	8.62	Hexavalent Chromi	-0.0012	20869

OK RP 9/2/09

EB083109-SO1



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : EB083109-SO1 #C9049418-006
Data File Name : ...\831_006.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 10:26:21

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

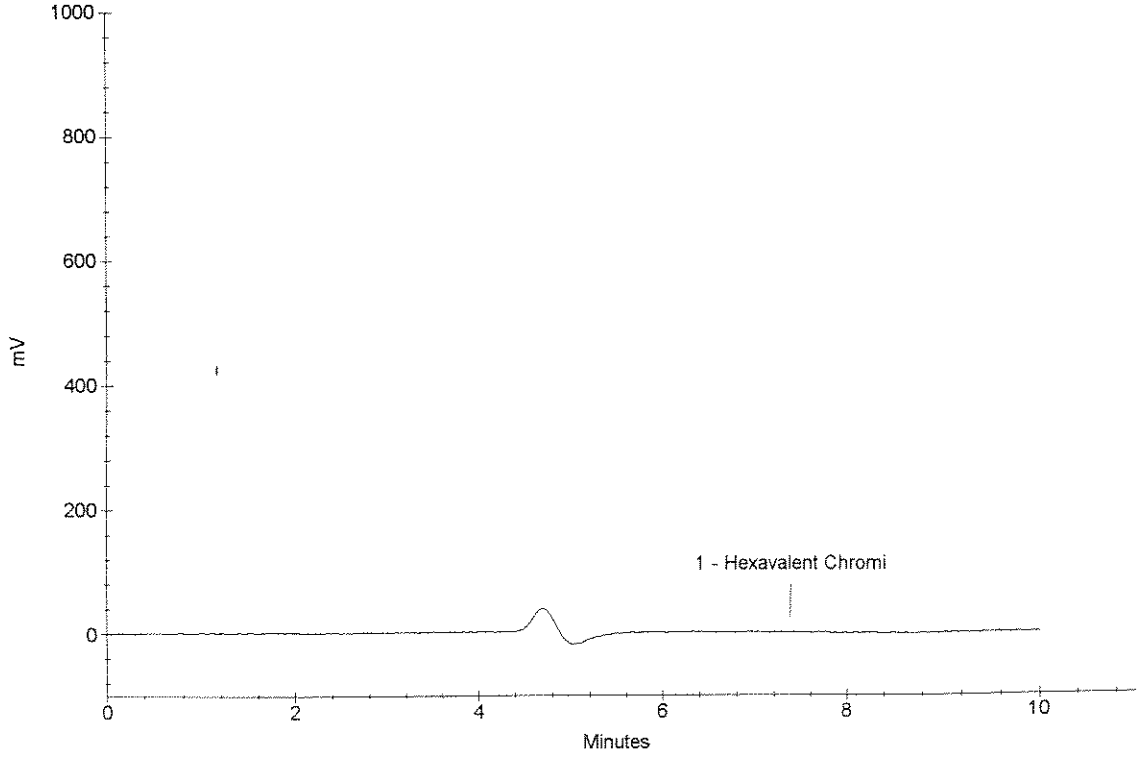
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	7.37	Hexavalent Chromi	-0.0009	29434

OK RP 9/2/09

EB083109-SO1



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : EB083109-SO1 DUP R0904948-006 DUP
Data File Name : ...\831_007.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 10:36:46

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

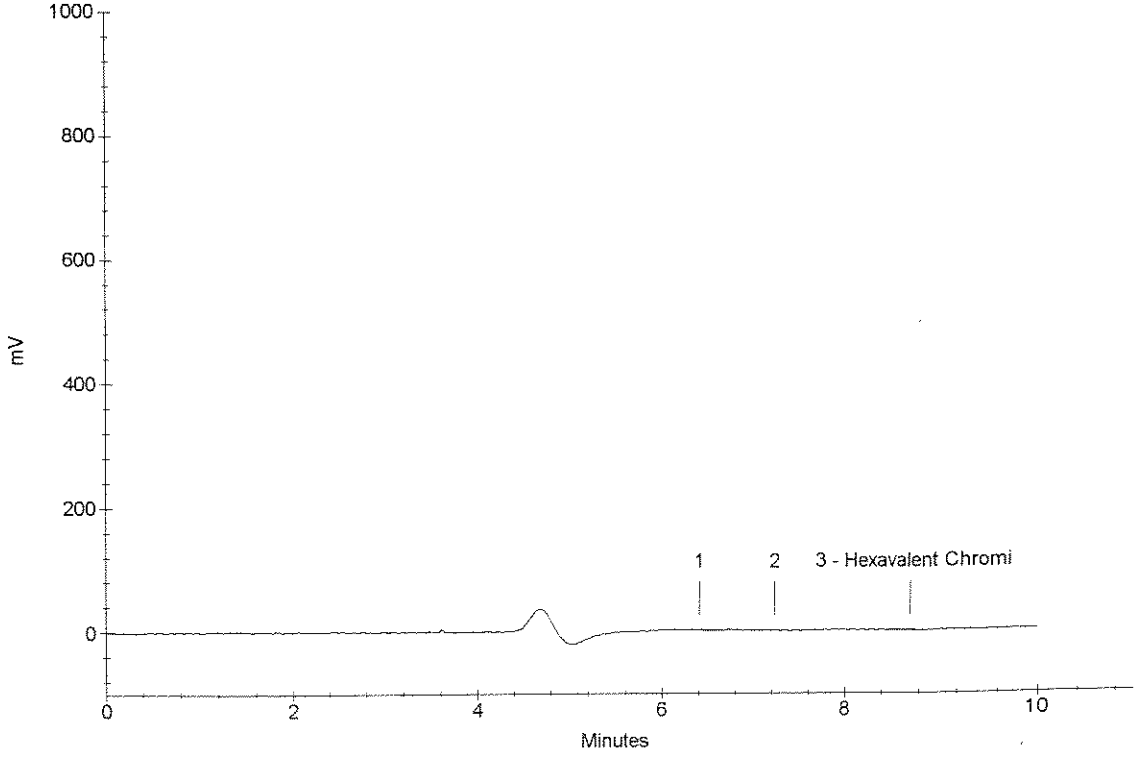
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
3	8.70	Hexavalent Chromi	-0.0011	23758

OK RP 9/2/09

EB083109-SO1 DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : EB083109-SO1 DUP 280904948-026
Data File Name : ...\831_008.DXD DUP
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 10:47:10

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

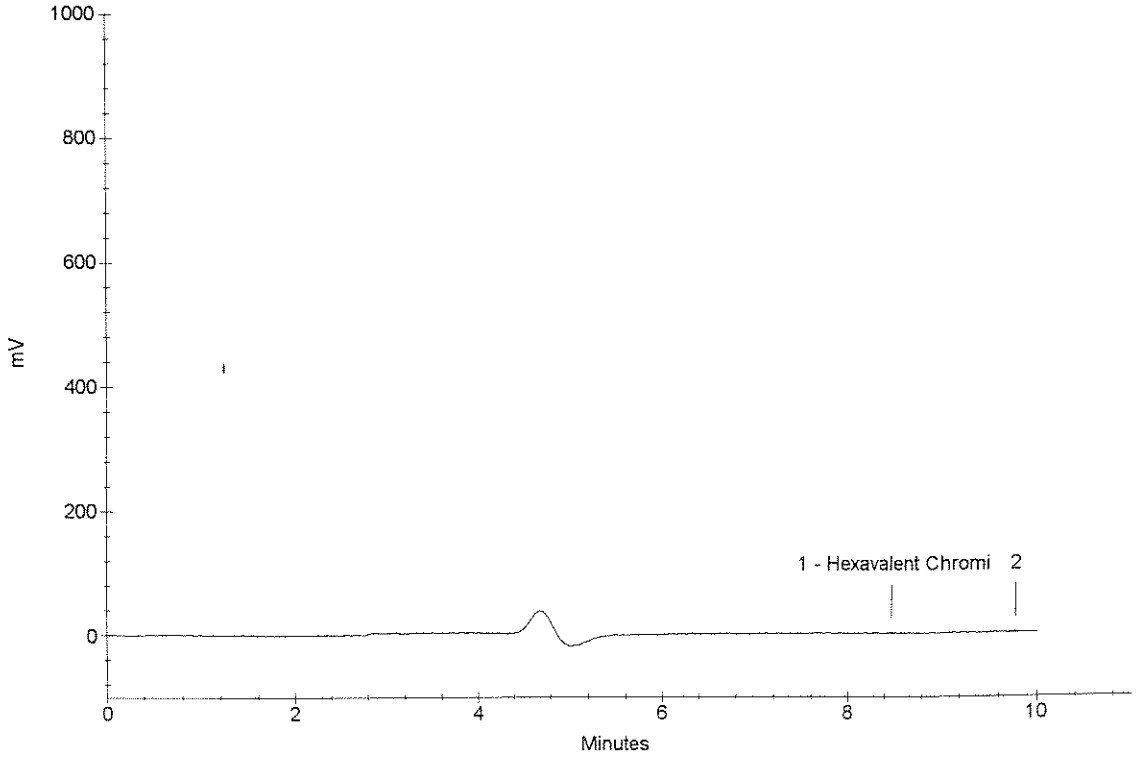
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.47	Hexavalent Chromi	-0.0014	15731

OK RP 9/2/09

EB083109-SO1 DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

R0904946
~~R0904948~~
0010
SPK

Sample Name : EB083109-SO1 SPK
Data File Name : ...\831_009.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 10:57:34

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

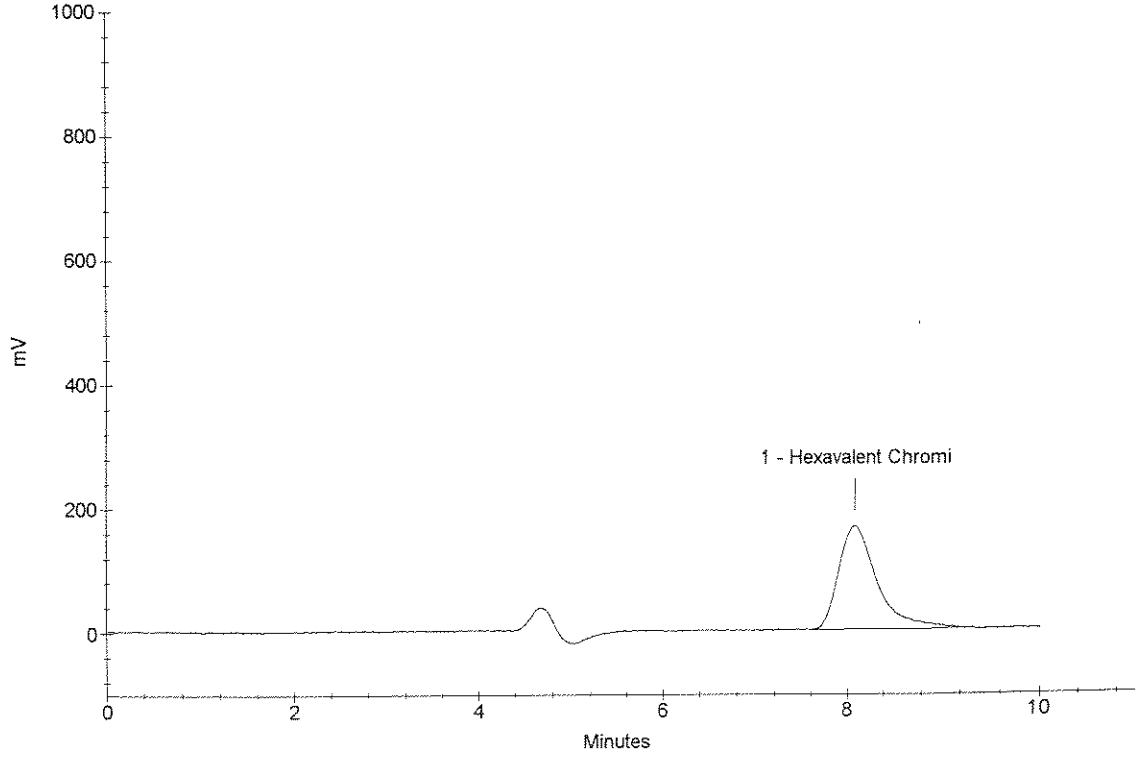
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.05	Hexavalent Chromi	0.1944	4894647

OK RP 9/2/09

EB083109-SO1 SPK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : EB083109-SO1 SPK R0904948-004 SPK
Data File Name : ...\831_010.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 11:07:59

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

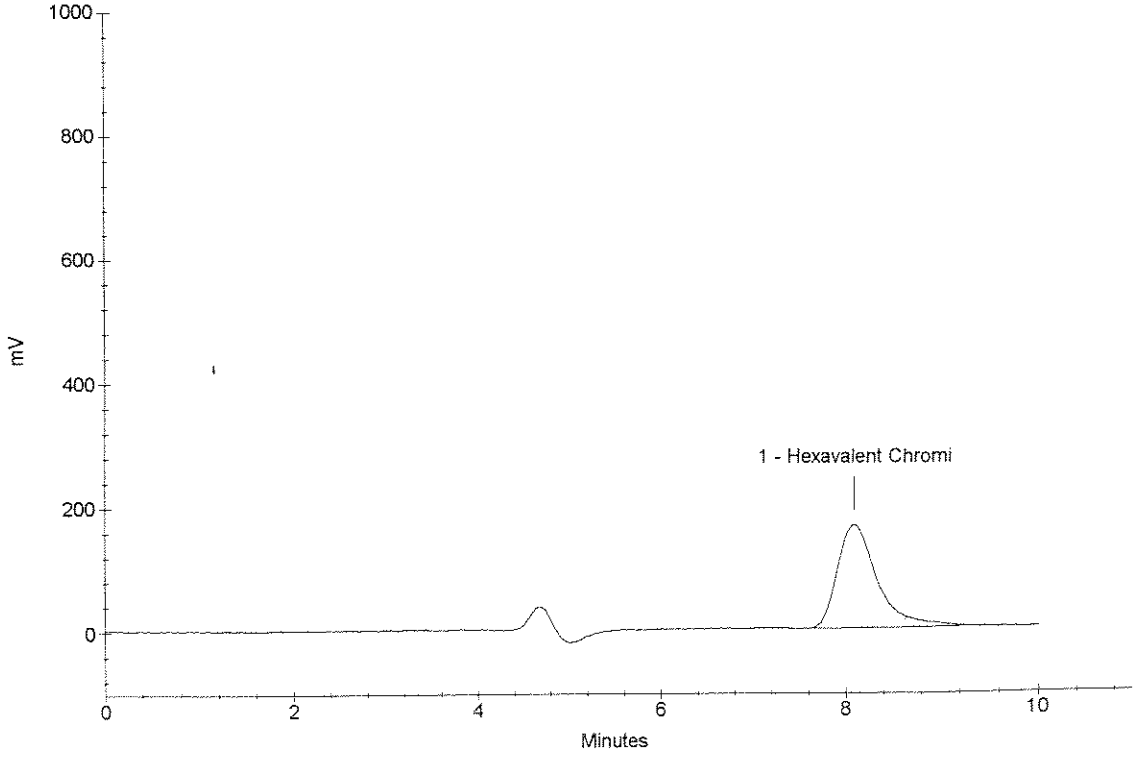
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.05	Hexavalent Chromi	0.1925	4848867

OK RP 9/2/09

EB083109-SO1 SPK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\831_011.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 11:18:23

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

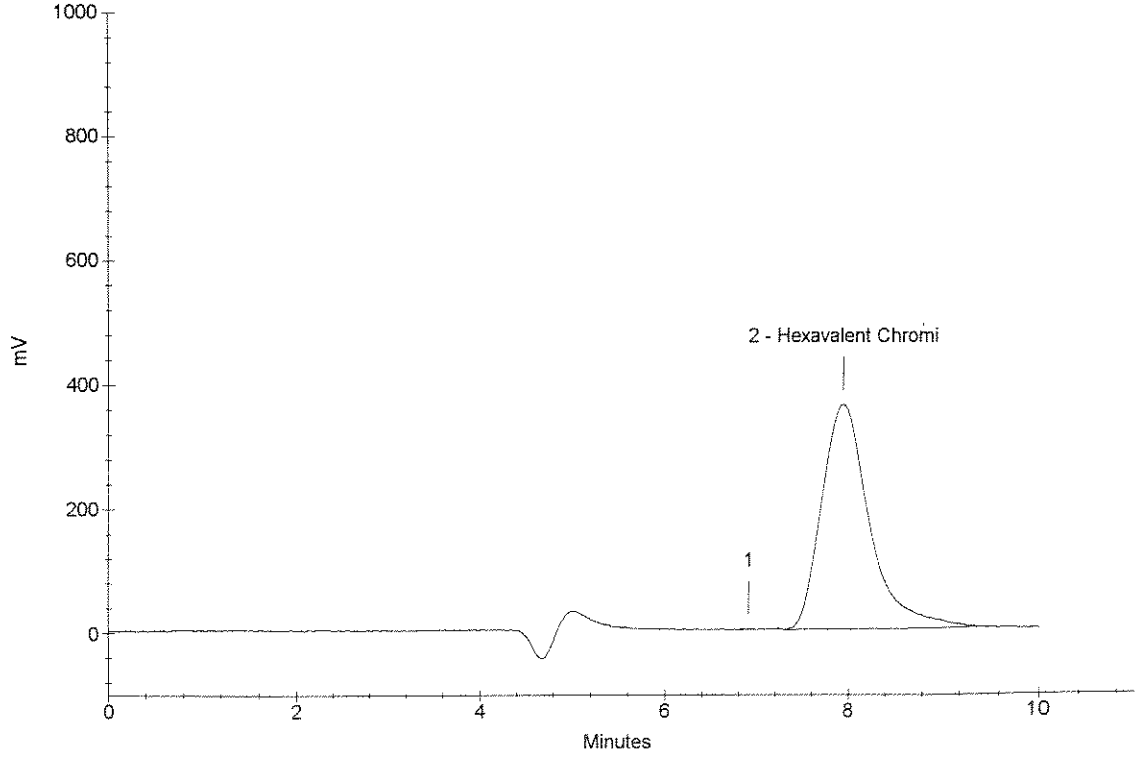
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.88	Hexavalent Chromi	0.5202	13013068

CK RP 9/2/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\831_012.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 11:28:47

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

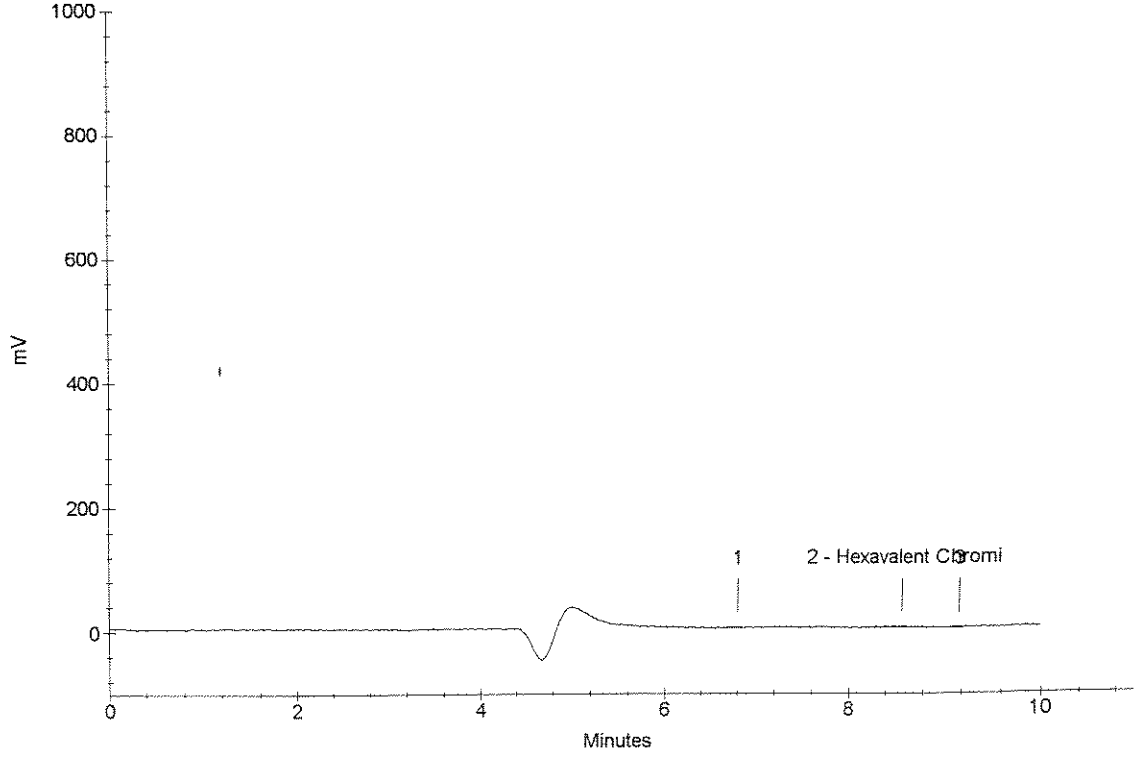
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	8.57	Hexavalent Chromi	-0.0005	38645

OK RP 9/2/09

CCB



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8042-01
Data File Name : ...\901_013.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 13:30:27

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

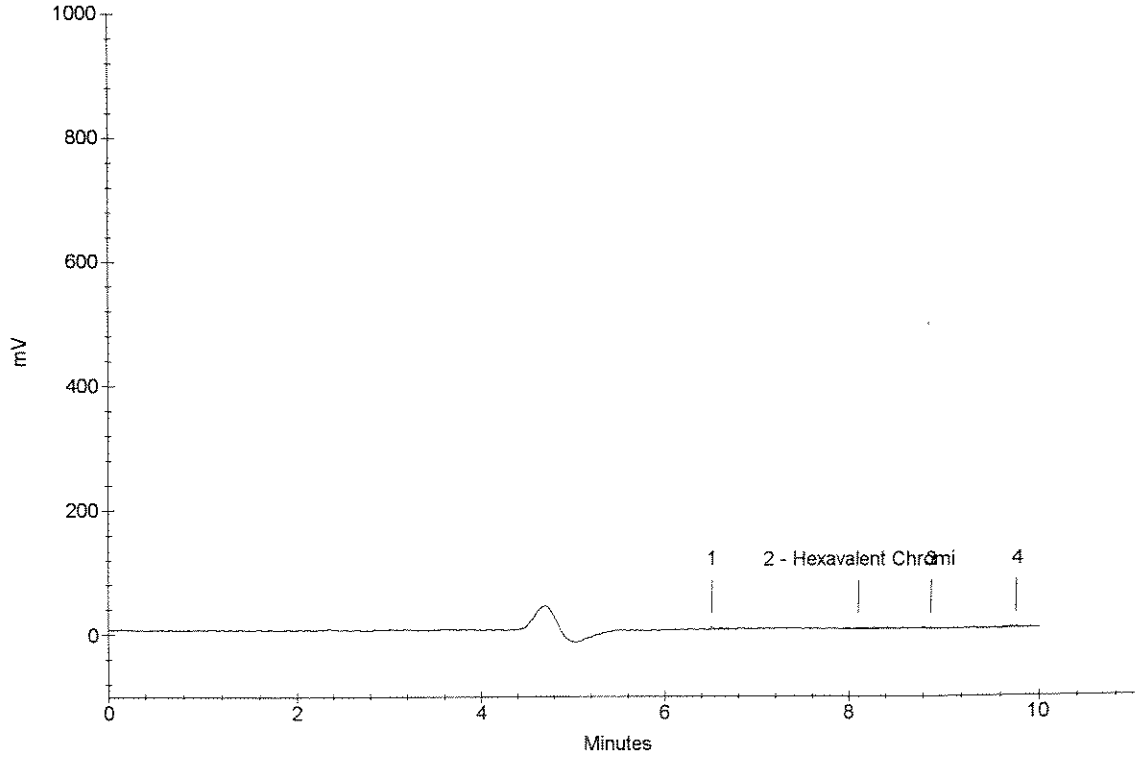
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	8.08	Hexavalent Chromi	-0.0001	48829

OK RR 9/2/09

MB 8042-01



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8042-01
Data File Name : ...\901_014.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 13:40:50

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

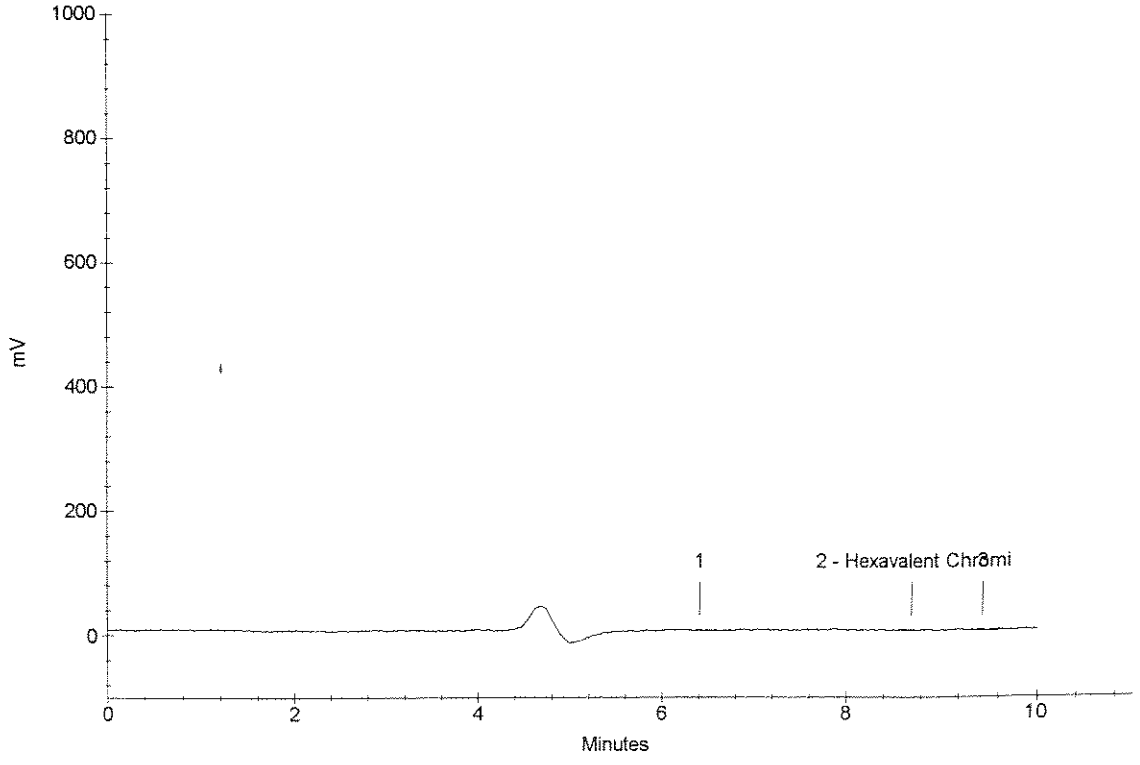
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	8.68	Hexavalent Chromi	-0.0016	11510

OK RP 9/2/09

MB 8042-01



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001
Data File Name : ...\901_015.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 13:51:15

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

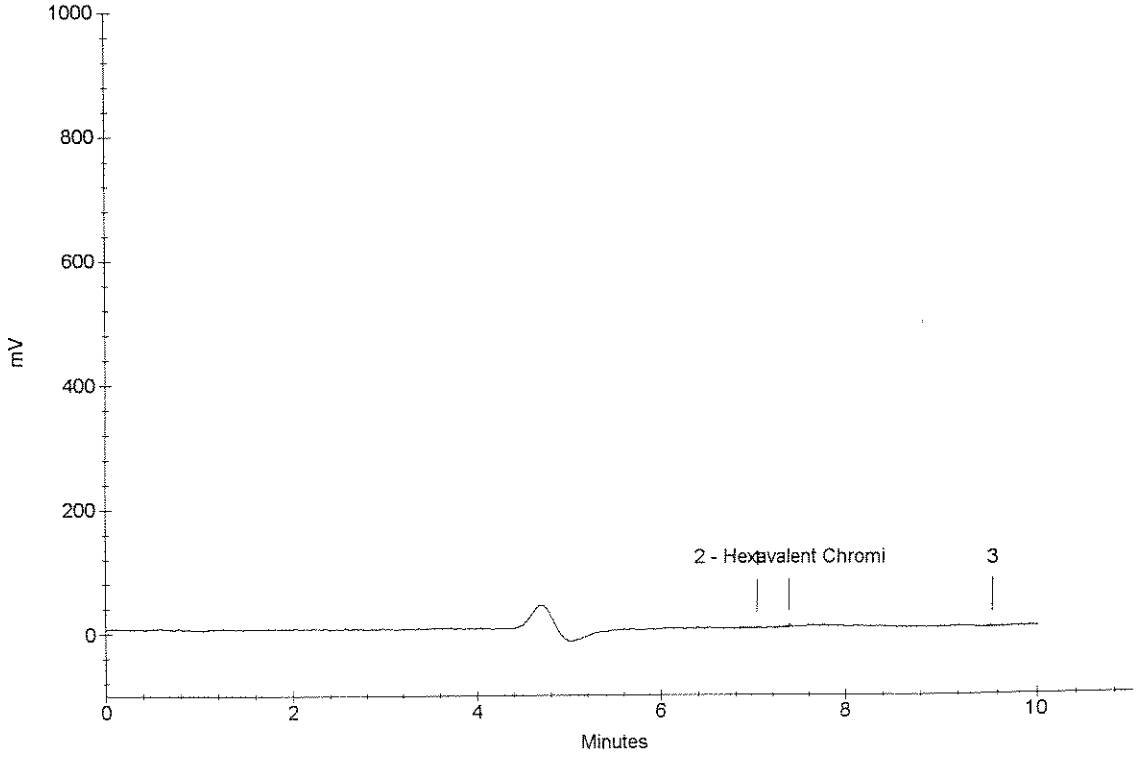
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.37	Hexavalent Chromi	-0.0013	18290

BK RP 9/2/09

R0904817-001



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001
Data File Name : ...\901_016.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 14:01:38

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

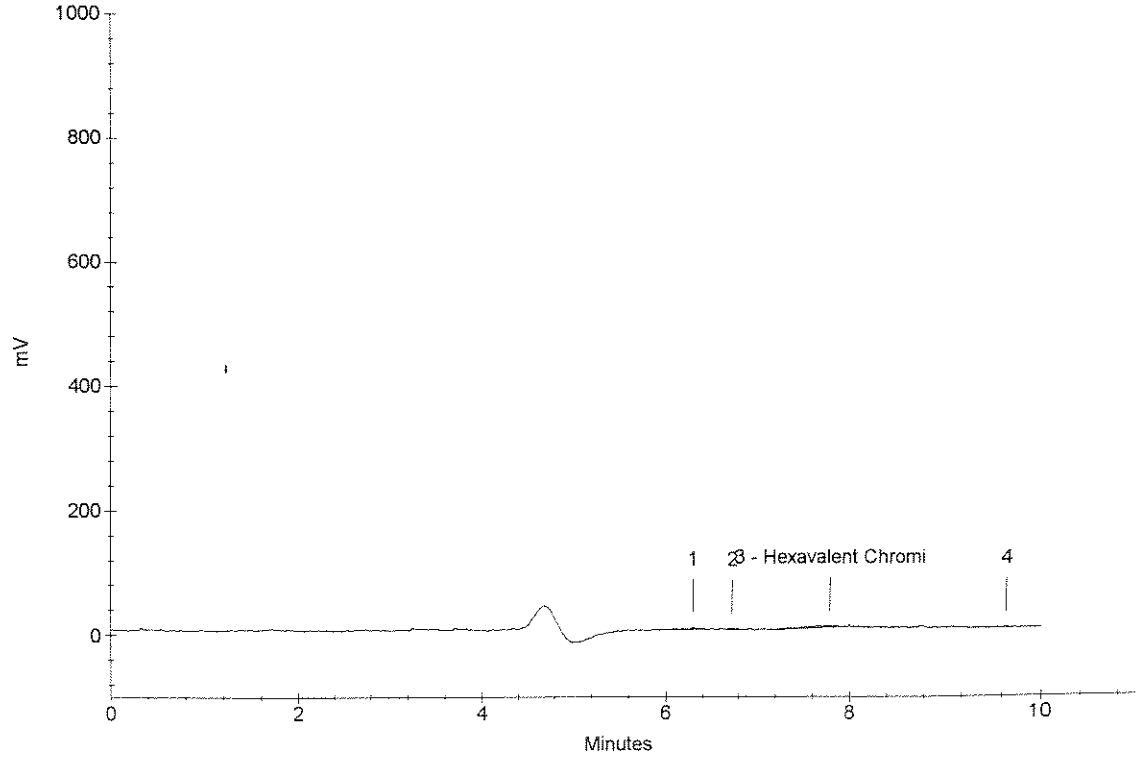
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
3	7.77	Hexavalent Chromi	0.0006	65980

OK RP 9/2/09

R0904817-001



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001 DUP
Data File Name : ...\901_017.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 14:12:03

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

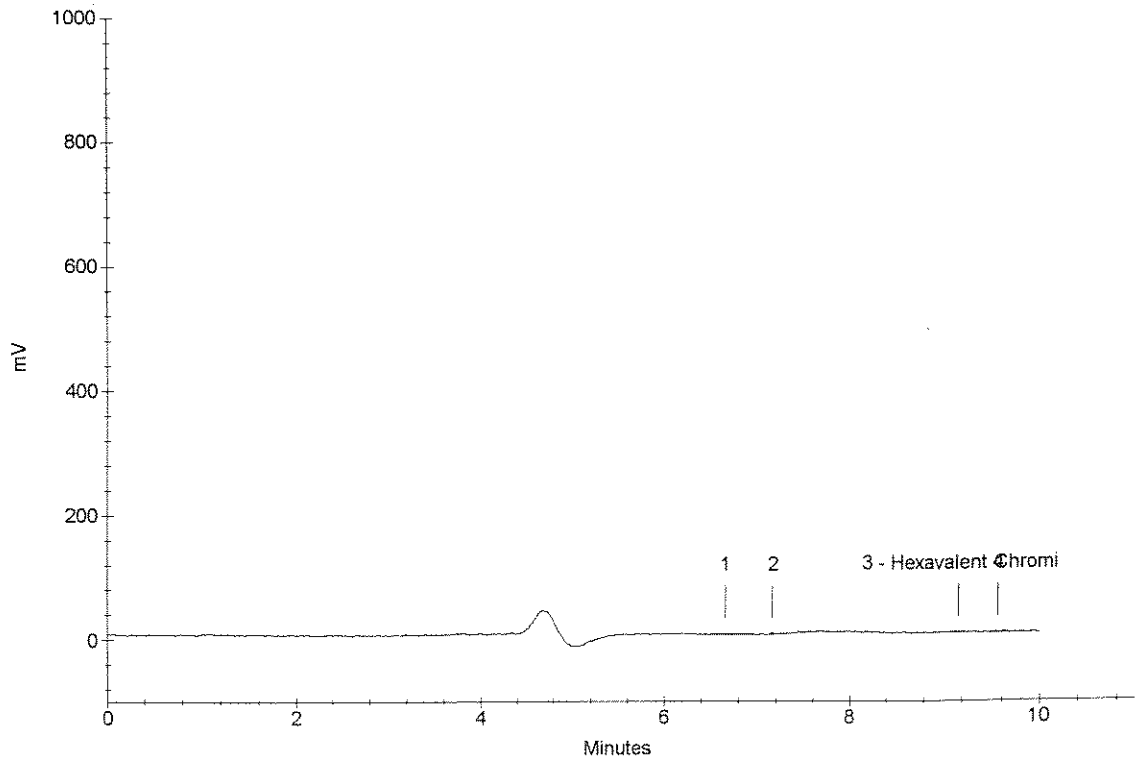
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
3	9.15	Hexavalent Chromi	-0.0017	8788

OK RP 9/2/09

R0904817-001 DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001 DUP
Data File Name : ...\901_018.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 14:22:28

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

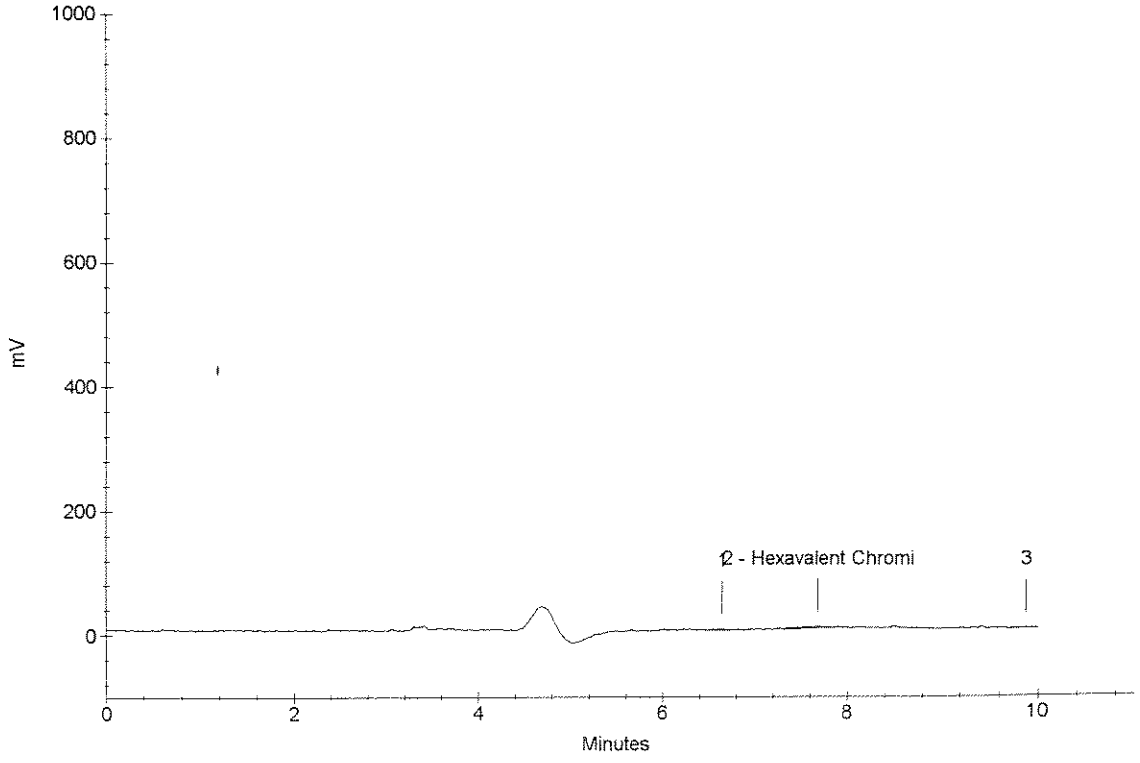
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.67	Hexavalent Chromi	-0.0000	50121

OK RP 9/2/09

R0904817-001 DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001 SPK
Data File Name : ...\901_019.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 14:32:52

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

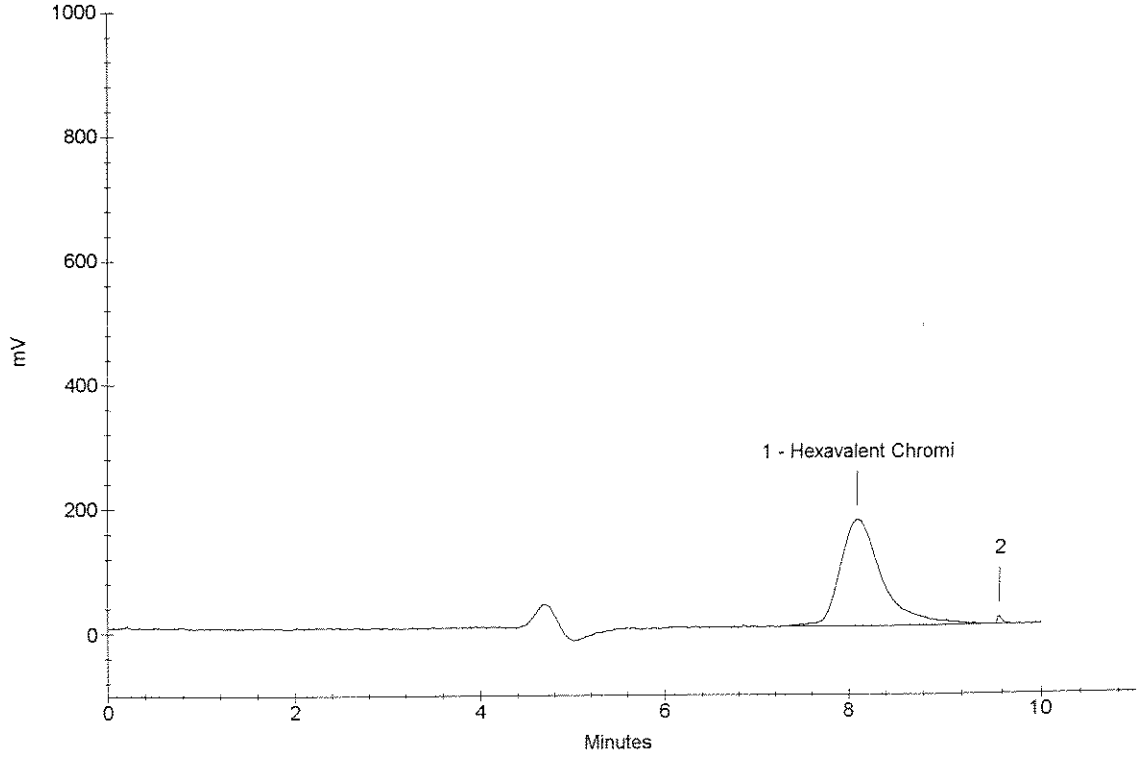
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.05	Hexavalent Chromi	0.2104	5293595

OK RP 9/2/09

R0904817-001 SPK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001 SPK
Data File Name : ...\901_020.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 14:43:17

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

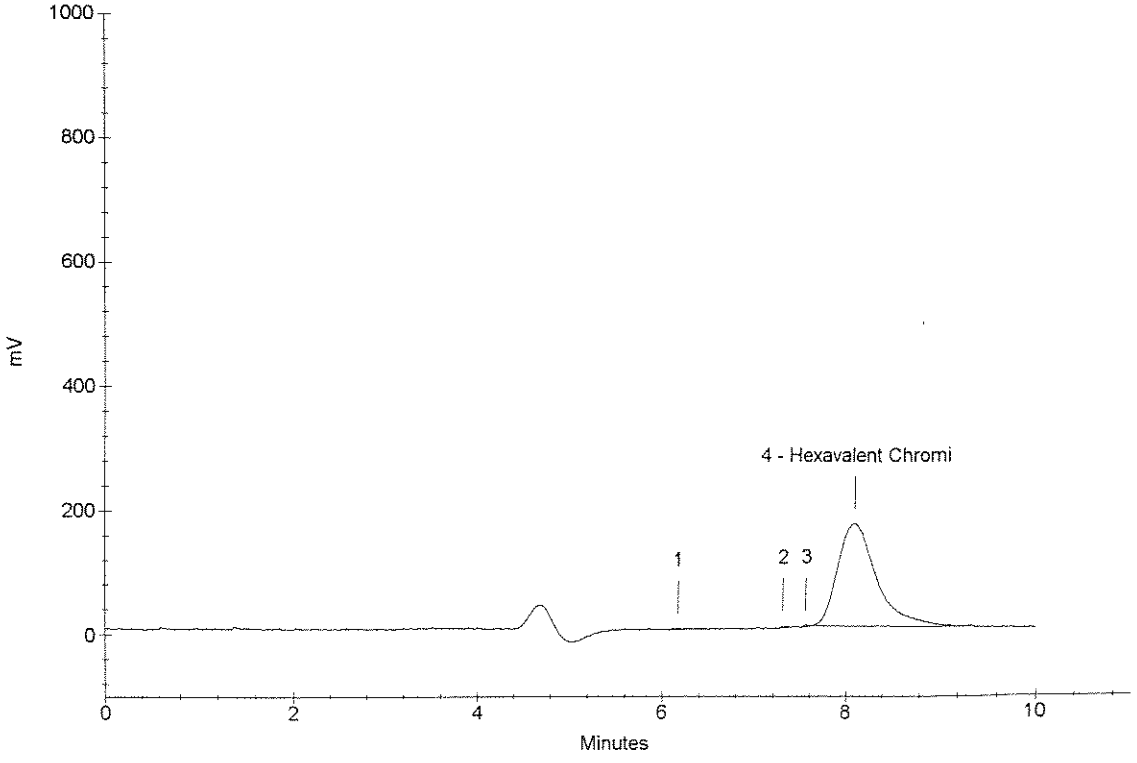
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
4	8.07	Hexavalent Chromi	0.1937	4876850

RP 9/2/09

R0904817-001 SPK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8043-01
Data File Name : ...\901_021.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 14:53:40

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

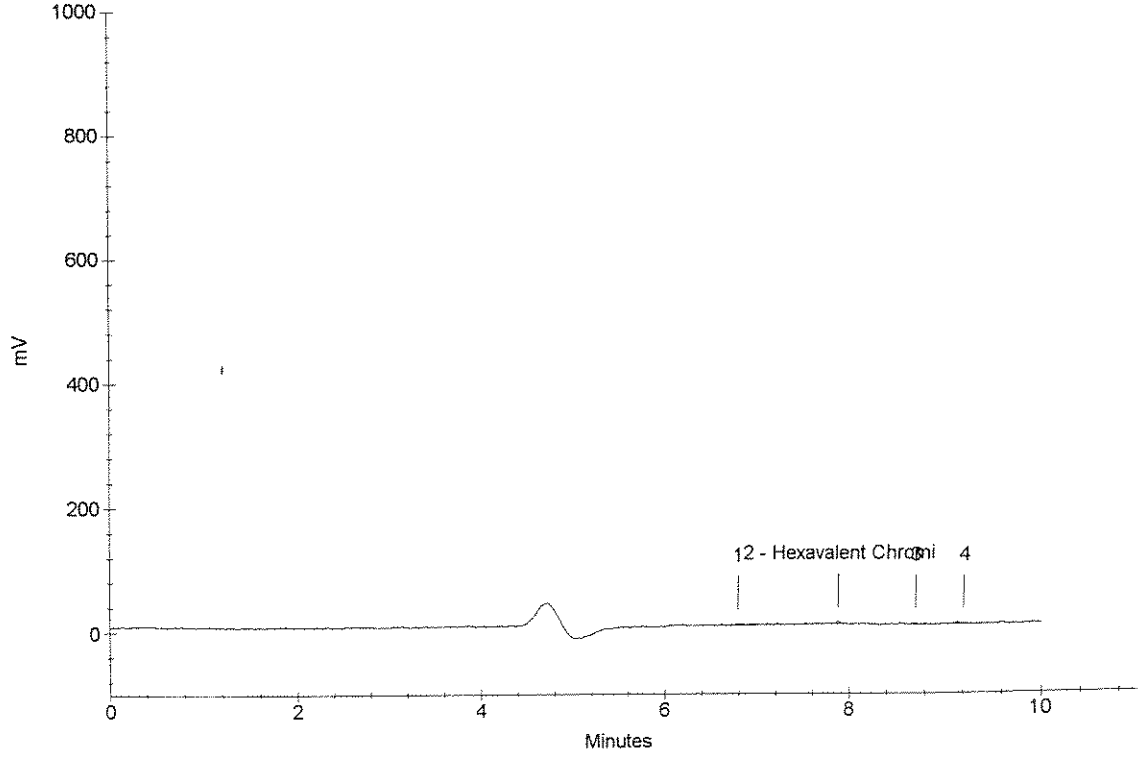
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.87	Hexavalent Chromi	-0.0015	14486

OK RP 9/2/09

MB 8043-01



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8043-01
Data File Name : ...\901_022.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 15:04:04

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

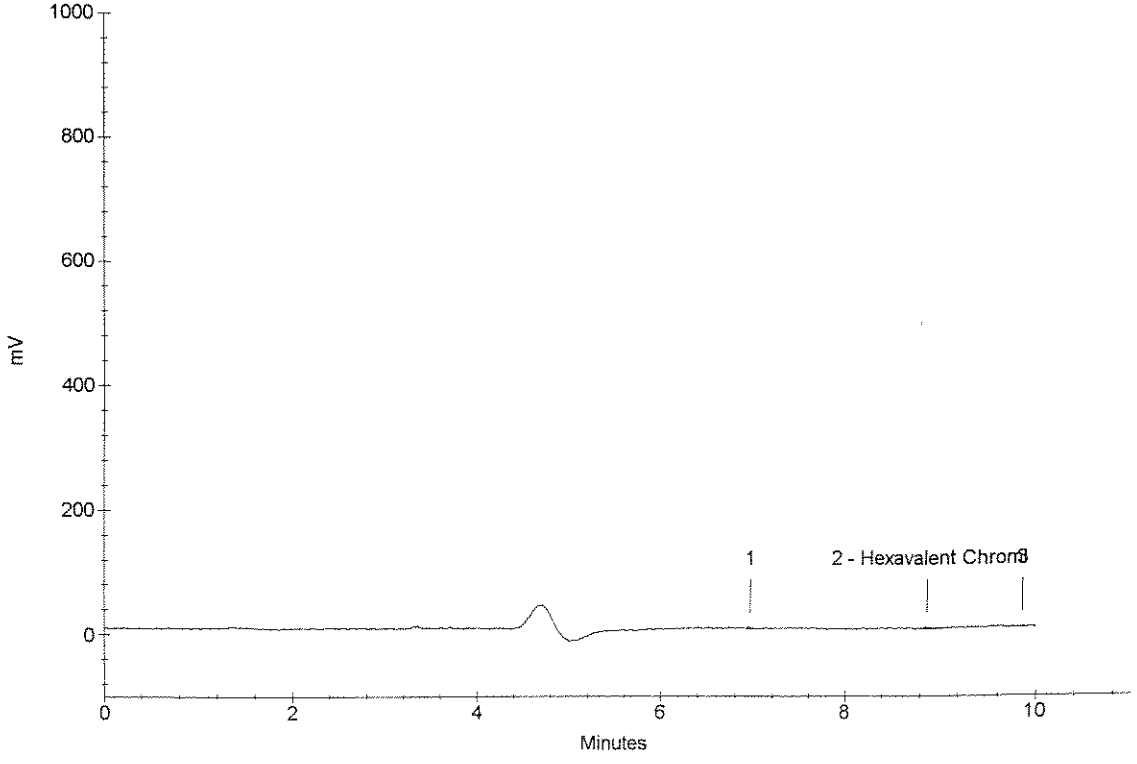
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	8.87	Hexavalent Chromi	-0.0015	14425

OK RP 9/2/09

MB 8043-01



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_023.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 15:14:29

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

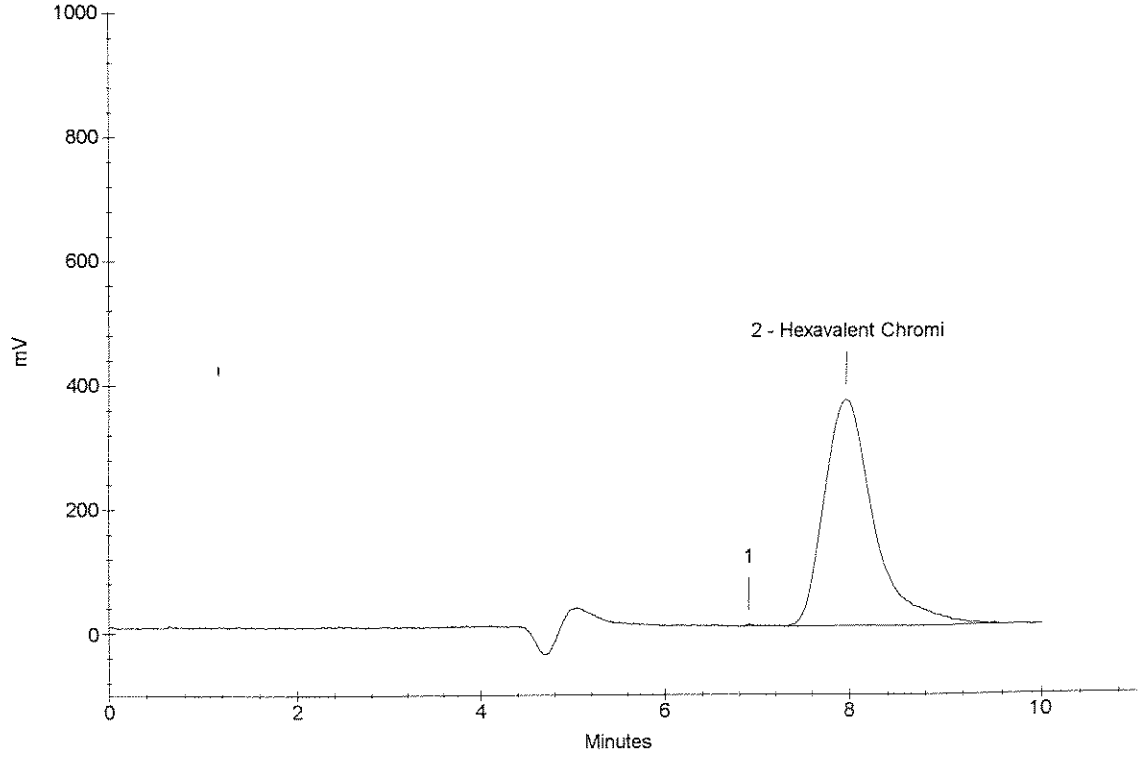
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.90	Hexavalent Chromi	0.5296	13247424

CK RP 9/2/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_024.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 15:24:53

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

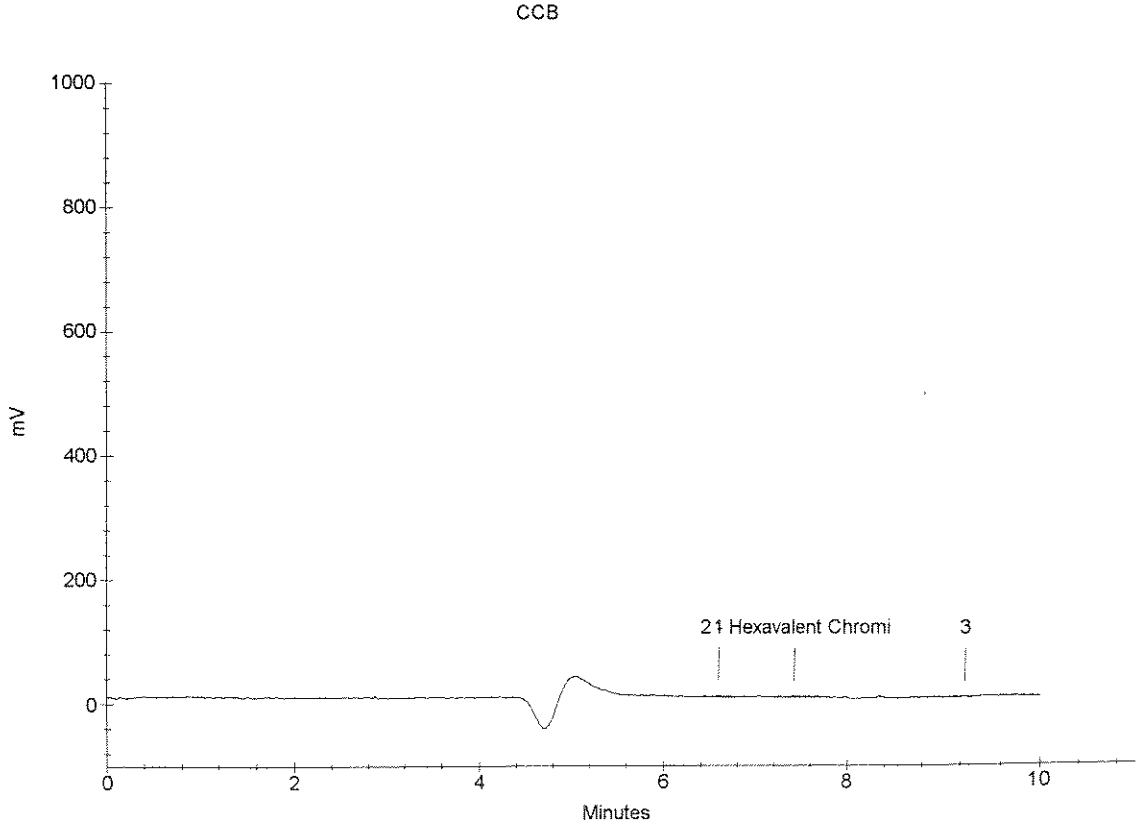
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.42	Hexavalent Chromi	-0.0002	45015

OK RP 9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\901_025.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 15:35:18

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

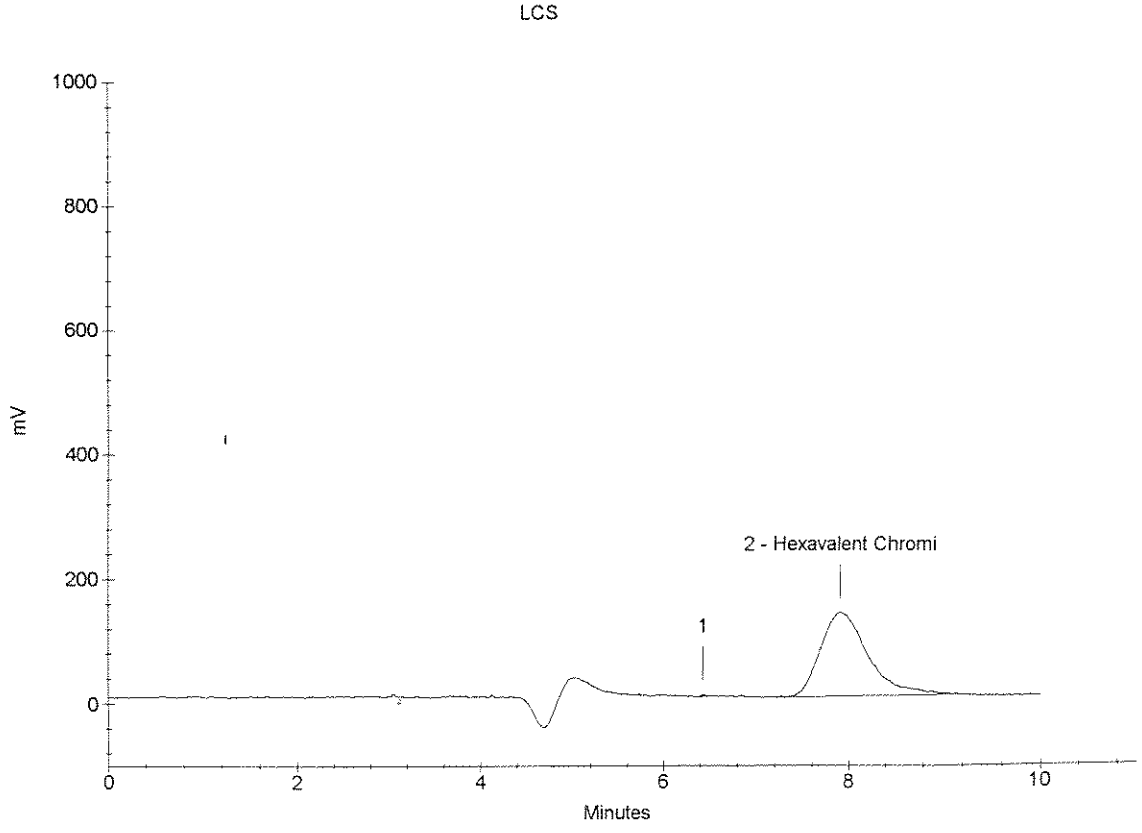
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.87	Hexavalent Chromi	0.1893	4767357

OK RP 9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\901_026.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 15:45:42

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

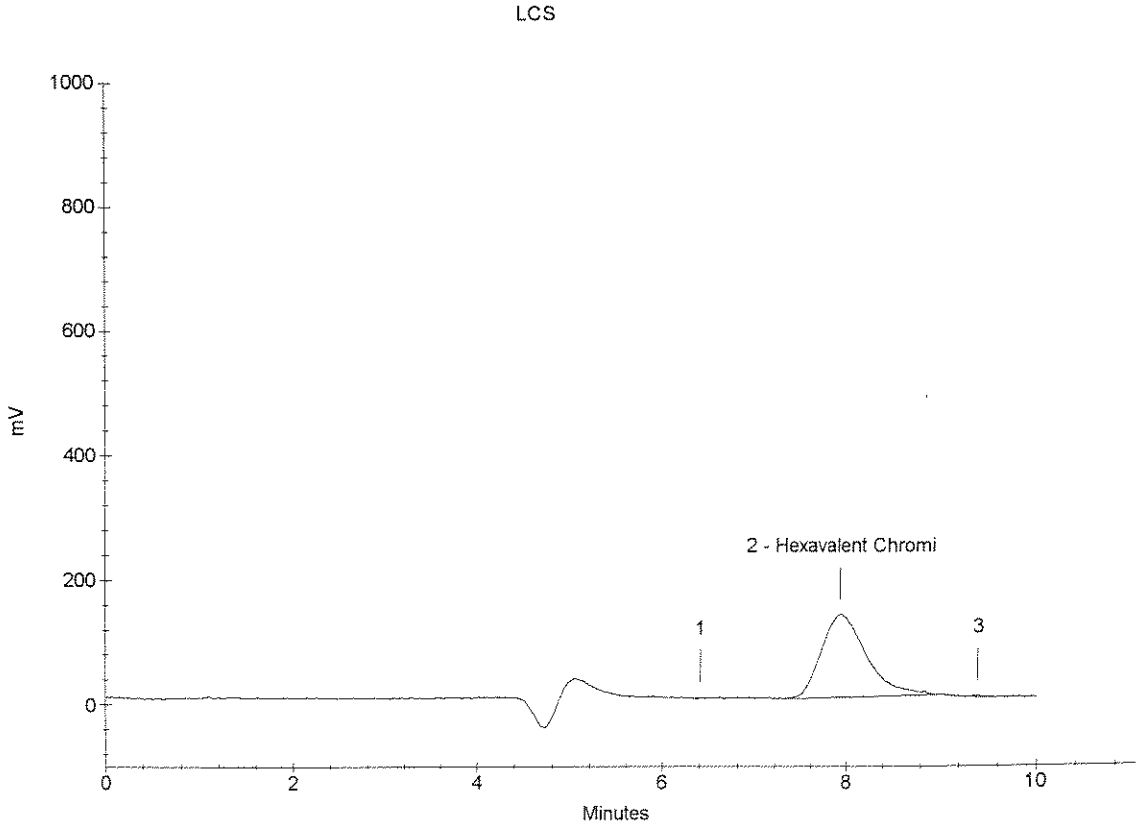
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.90	Hexavalent Chromi	0.1828	4607080

OK RP 9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-002
Data File Name : ...\901_027.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 15:56:07

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

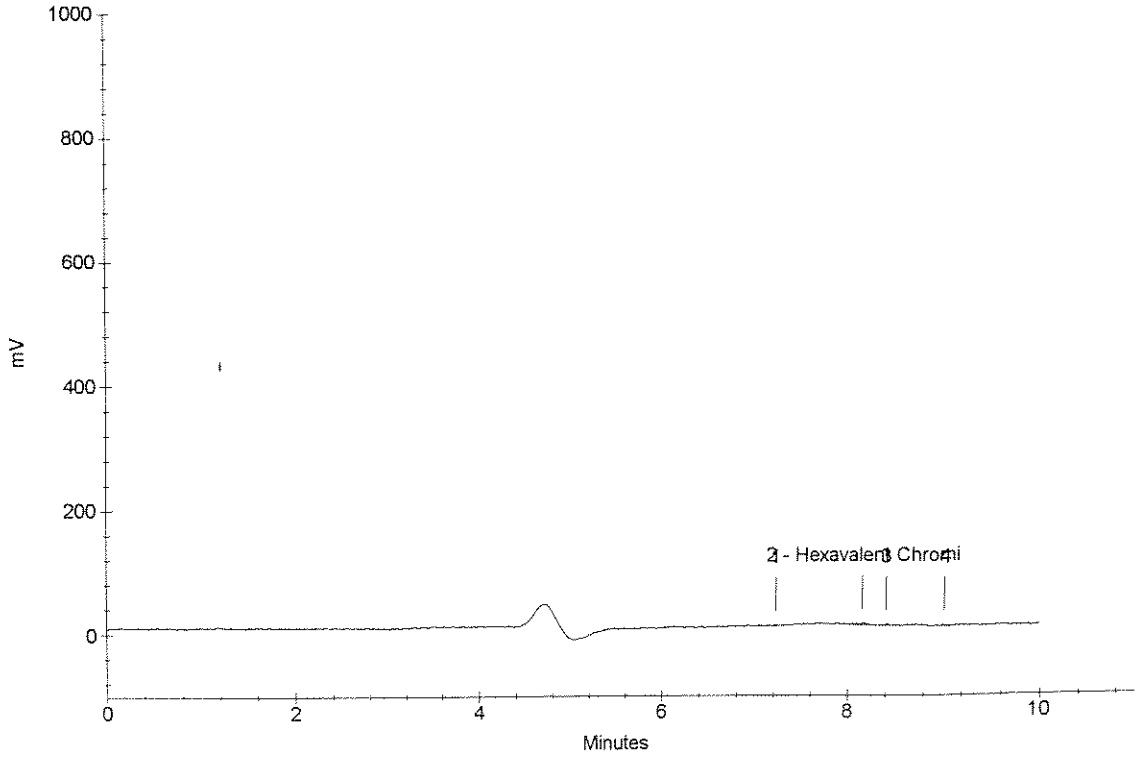
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	8.15	Hexavalent Chromi	-0.0012	20918

OK RF 9/2/09

R0904817-002



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-002
Data File Name : ...\901_028.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 16:06:32

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : REP

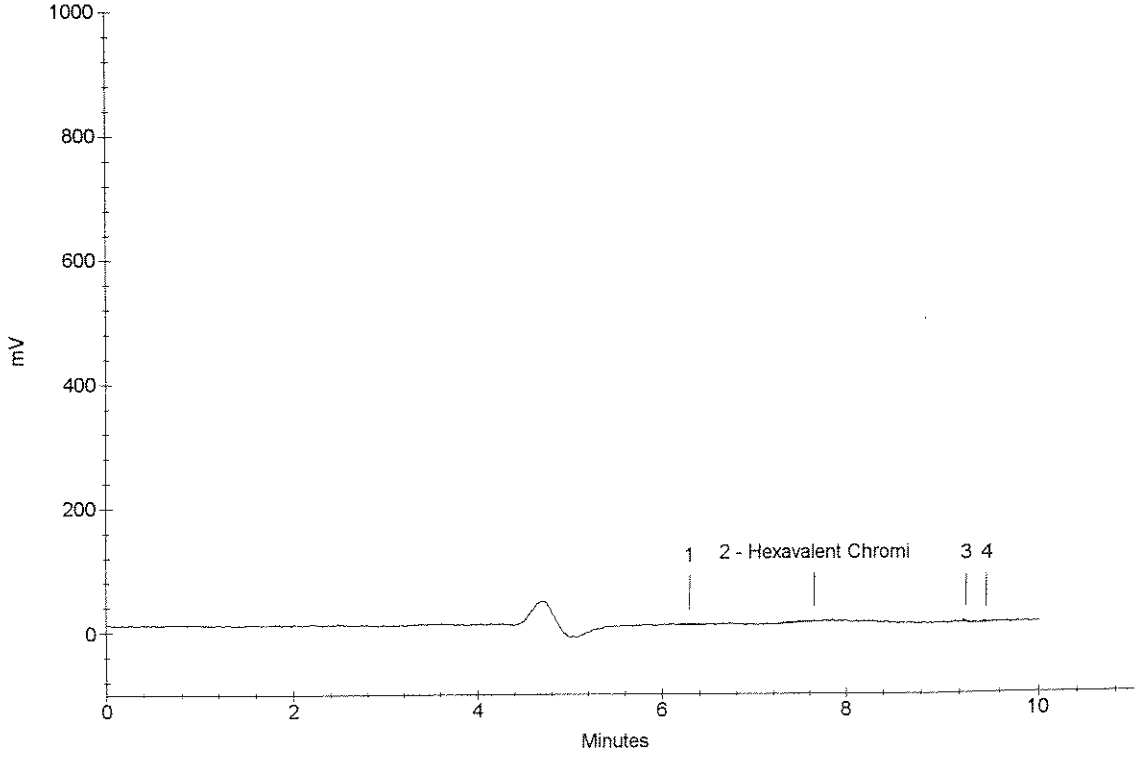
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
2	7.63	Hexavalent Chromi	-0.0007	32635

OK RP 9/2/09

R0904817-002



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_029.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 16:16:57

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

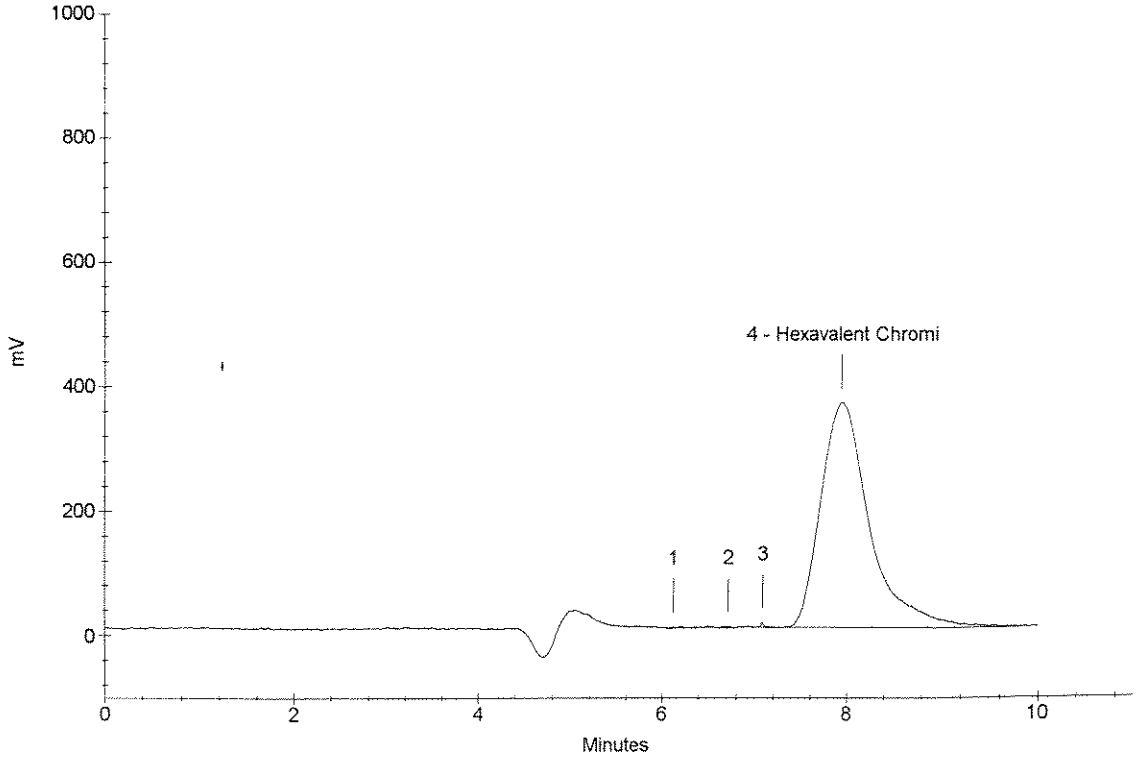
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
4	7.88	Hexavalent Chromi	0.5285	13219645

OK RP 9/2/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_030.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 9/1/09 16:27:21

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

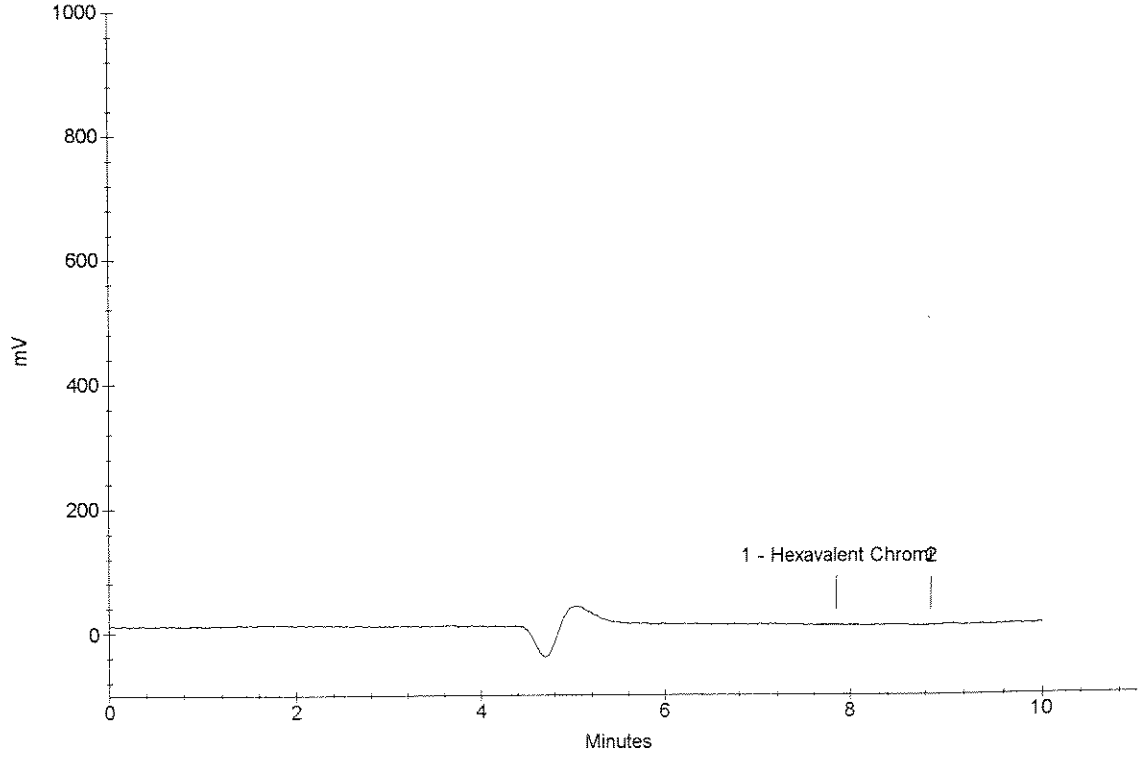
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	7.83	Hexavalent Chromi	-0.0009	28149

OK RR 9/2/09

CCB



Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex 1000I, IC #1

Column: AS7 Analytical Column, NG-1 Guard Column, 4mm, 06/02/08

Curve Date: 08/11/09 **Loop size:** 100 uL Loop

Analyst: RP **Analysis Date:** 9/1/09

Standards Prep Dates & Log ID's:

Std Type	*Date Rec'd*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Standard Stock	02/05/09	WC85265C		Calibration Stds	08/11/09	SAME AS WC85303E
LCS / MS Soluble Stock	02/05/09	WC85265C		Soluble MS	Daily	SAME AS WC85304B
I/CCV Standard Stock	02/05/09	WC85265D		I/CCV	Daily	SAME AS WC85303F
LCS / MS Insoluble Stock	01/11/08 Soils Only	WC85095H Soils Only		Insoluble LCS/MS	Daily	SAME AS WC85304C
LCS for Waters	Daily	SAME AS WC85304A		MS for Waters	Daily	SAME AS WC85304B

Comments:

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 1
Sample Type : Calibration Update
Data File Name : ...\811_001.DXD
Method File Name : ...\Cr6-0811.met

Date Time Collected : 8/11/09 09:10:04
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW/CS

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 20.00 Hz

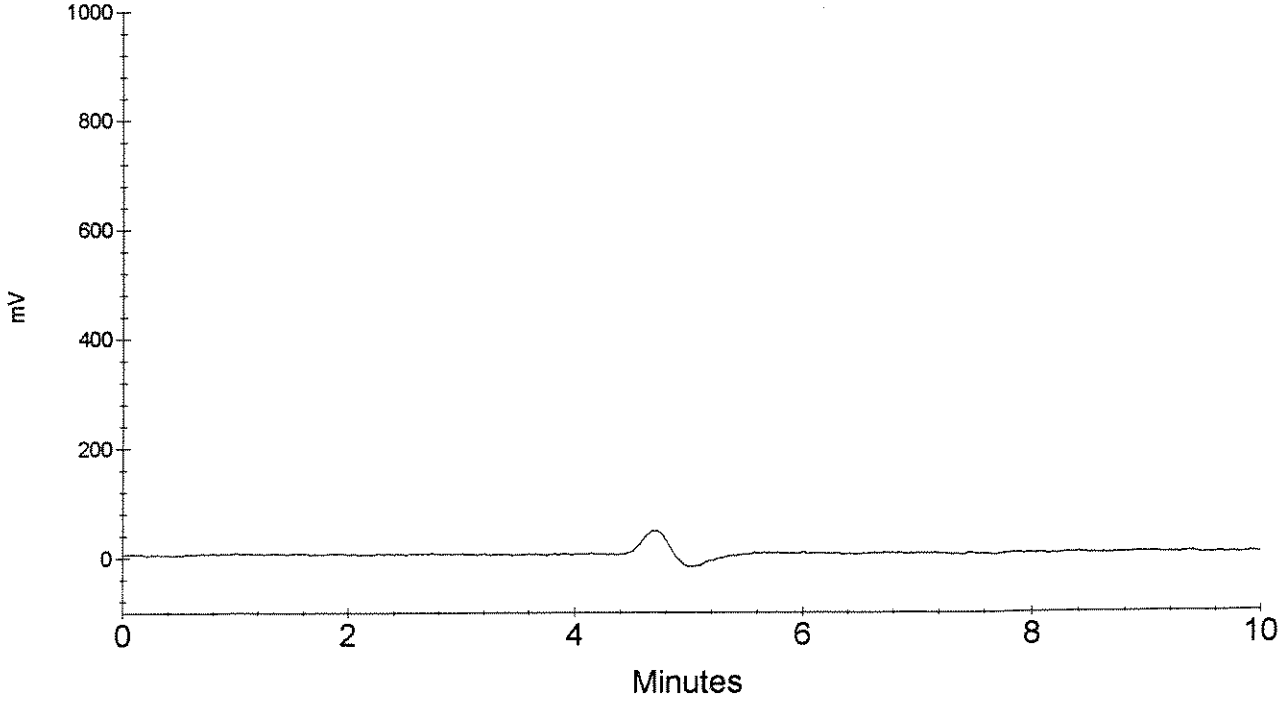
Calibration Type : EXTERNAL
Calibration Level : 1

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.000	0

OK
CMW 8/11/09

STANDARD 1



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 2
Sample Type : Calibration Update
Data File Name : ...\811_002.DXD
Method File Name : ...\Cr6-0811.met

Date Time Collected : 8/11/09 09:20:28
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW/CS

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 20.00 Hz

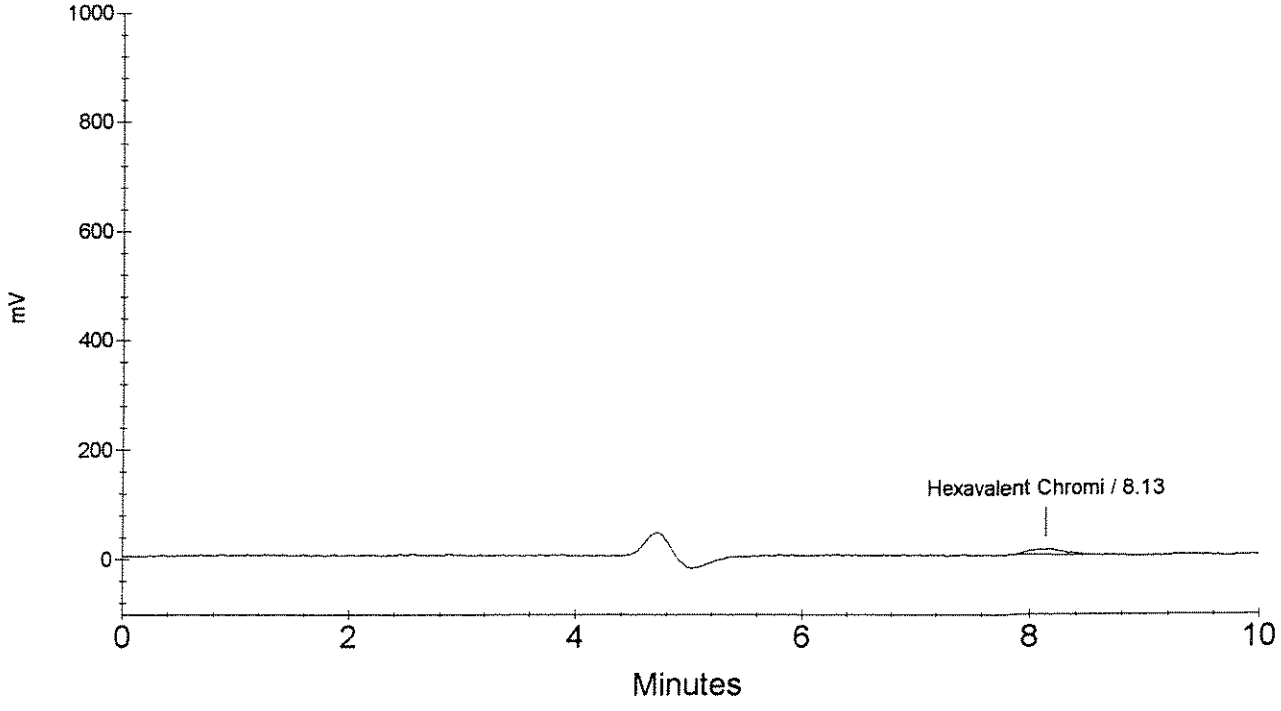
Calibration Type : EXTERNAL
Calibration Level : 2

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.13	Hexavalent Chromi	0.010	211244

OK
CMW 8/11/09

STANDARD 2



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 3
Sample Type : Calibration Update
Data File Name : ...\811_003.DXD
Method File Name : ...\Cr6-0811.met

Date Time Collected : 8/11/09 09:30:52
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW/CS

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 20.00 Hz

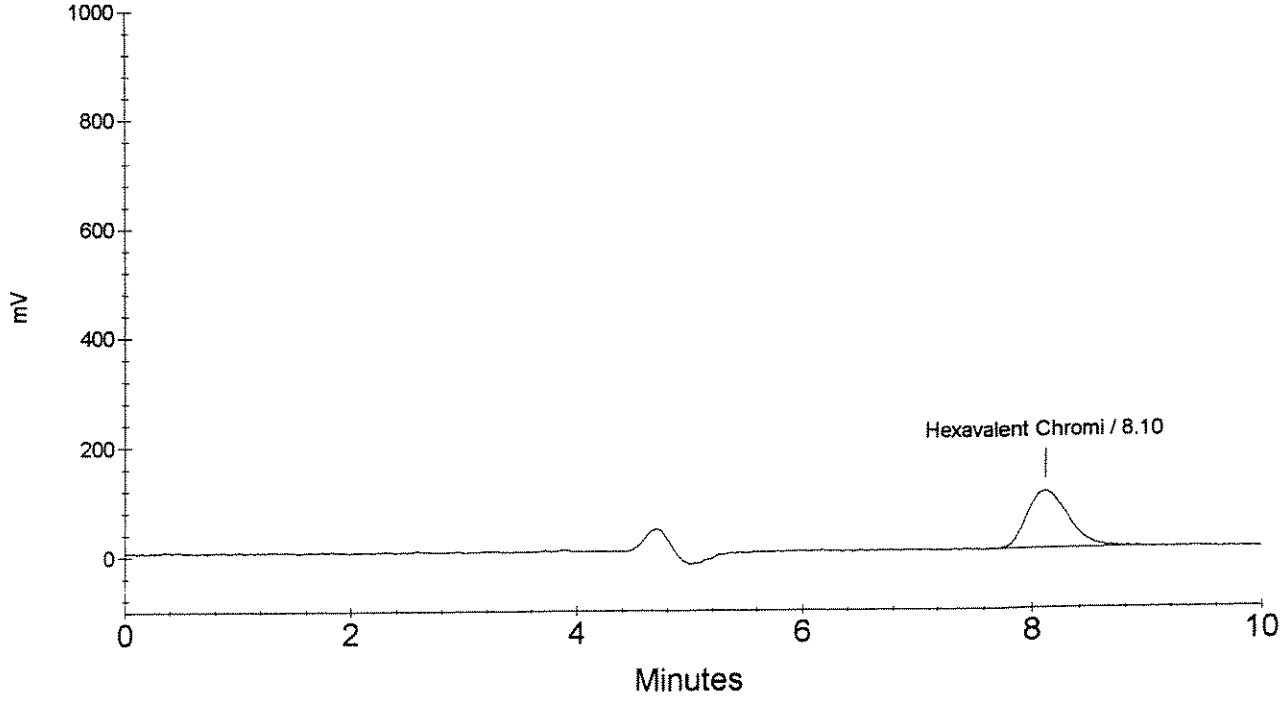
Calibration Type : EXTERNAL
Calibration Level : 3

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.10	Hexavalent Chromi	0.100	2545170

ok CMW 8/11/09

STANDARD 3



00563

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 4
Sample Type : Calibration Update
Data File Name : ...\811_004.DXD
Method File Name : ...\Cr6-0811.met

Date Time Collected : 8/11/09 09:41:16
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW/CS

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 20.00 Hz

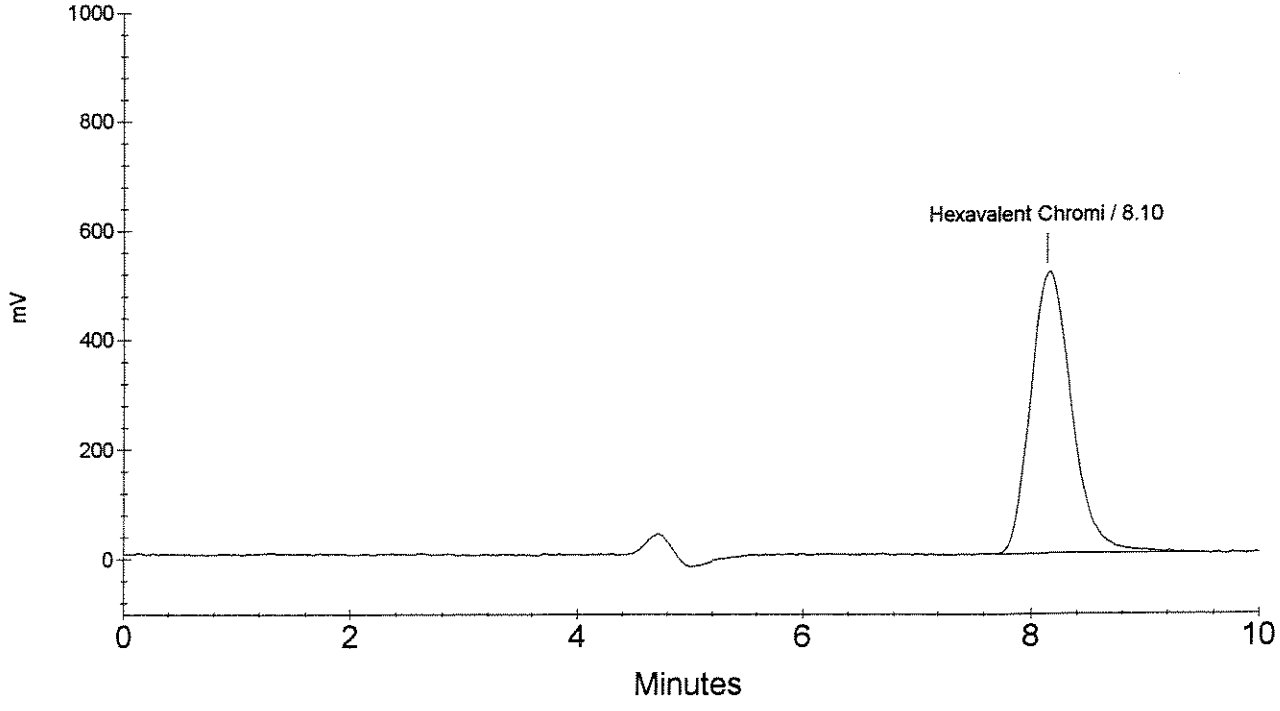
Calibration Type : EXTERNAL
Calibration Level : 4

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.10	Hexavalent Chromi	0.500	12738675

OK
CMW 8/11/09

STANDARD 4



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 5
Sample Type : Calibration Update
Data File Name : ...\811_005.DXD
Method File Name : ...\Cr6-0811.met

Date Time Collected : 8/11/09 09:51:40
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW/CS

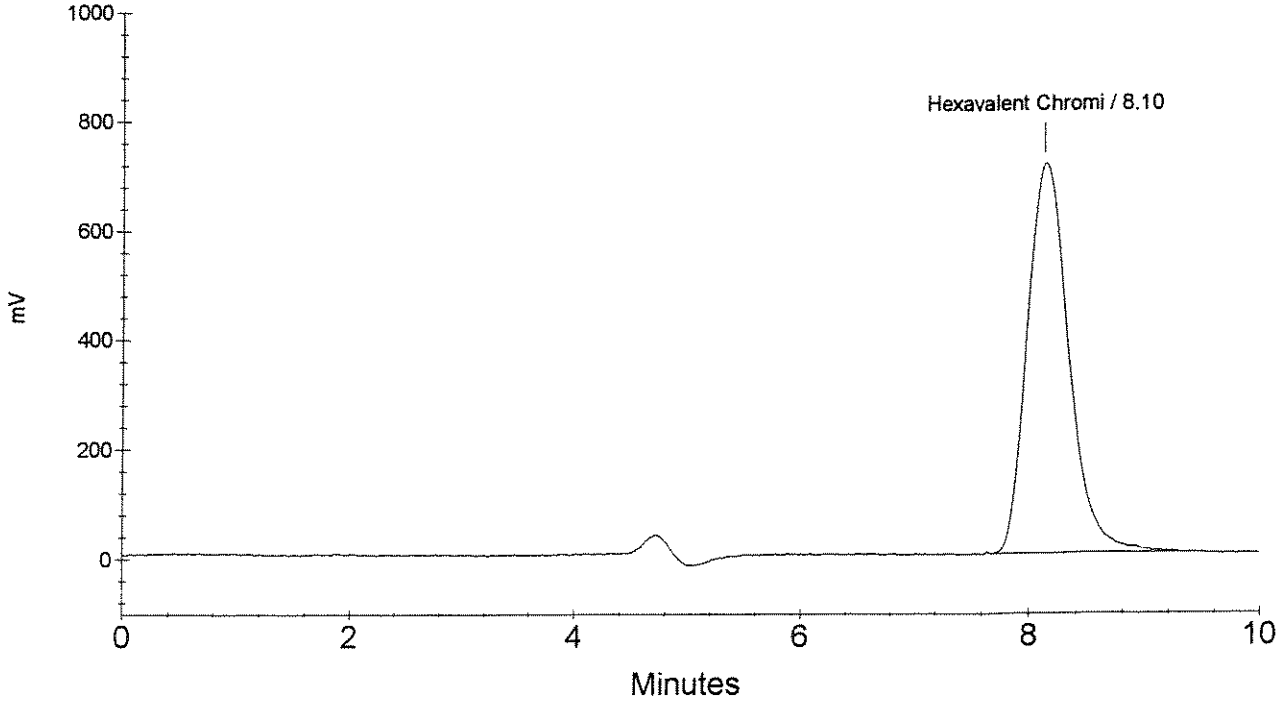
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 20.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 5

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.10	Hexavalent Chromi	0.700	17583222

STANDARD 5



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 6
Sample Type : Calibration Update
Data File Name : ...\811_006.DXD
Method File Name : ...\Cr6-0811.met

Date Time Collected : 8/11/09 10:02:04
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW/CS

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 20.00 Hz

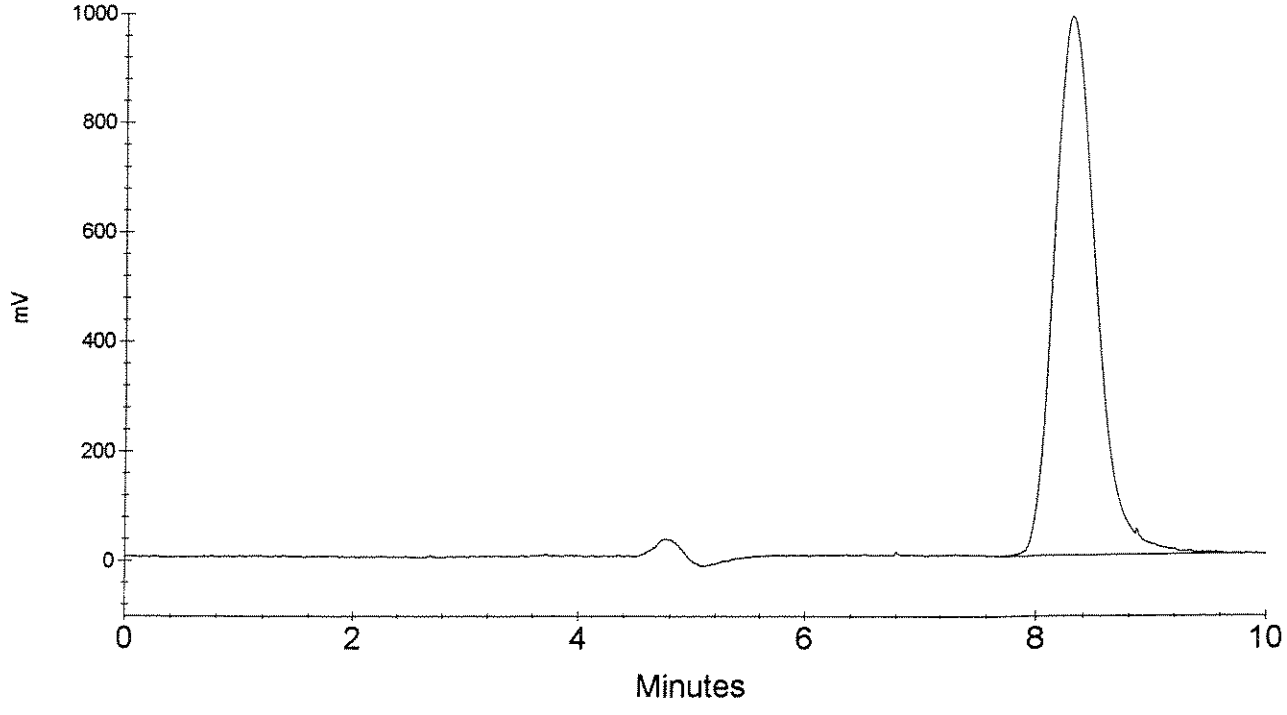
Calibration Type : EXTERNAL
Calibration Level : 6

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.27	Hexavalent Chromi	1.000	24790908

OK
CMT 8/11/09

STANDARD 6



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICV
Data File Name : ...\811_007.DXD
Method File Name : ...\CR6-0811.MET
Date Time Collected : 8/11/09 10:12:28

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

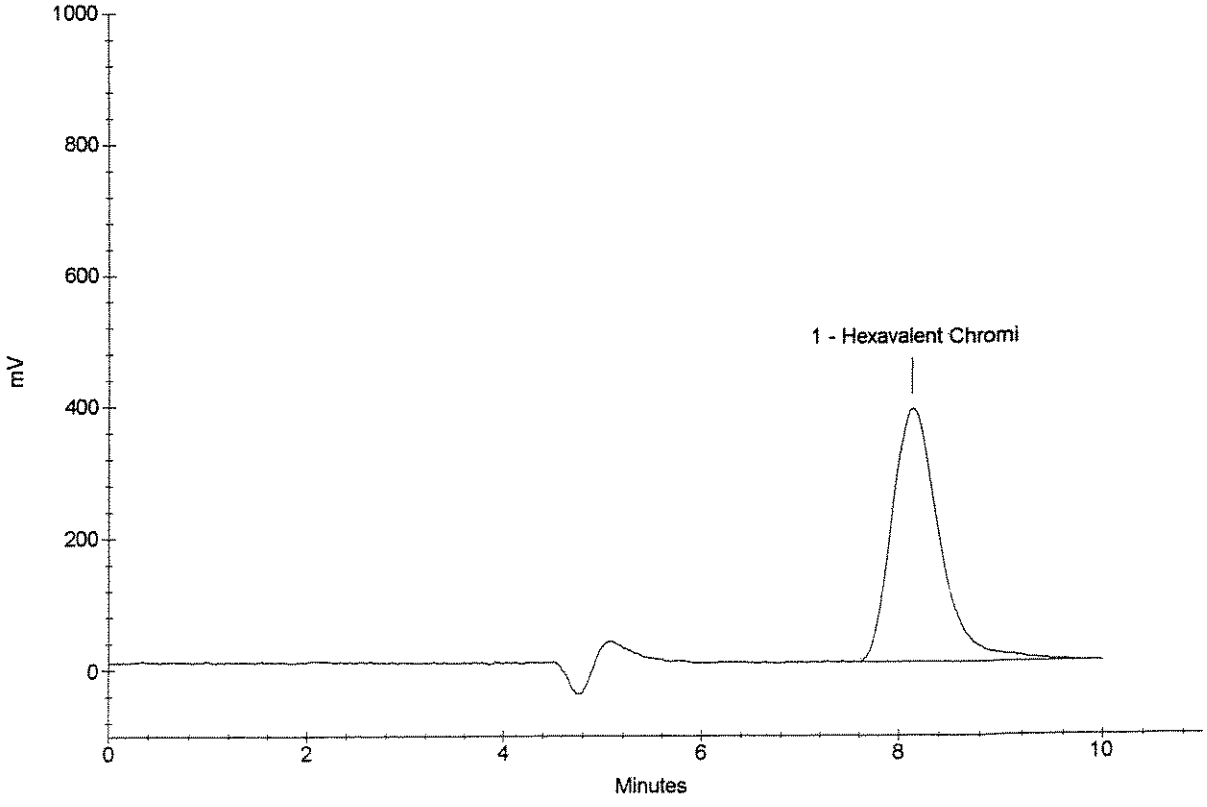
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.10	Hexavalent Chromi	0.5016	12550588

8/11/09
ICV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICB
Data File Name : ...\811_008.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 8/11/09 10:22:52

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

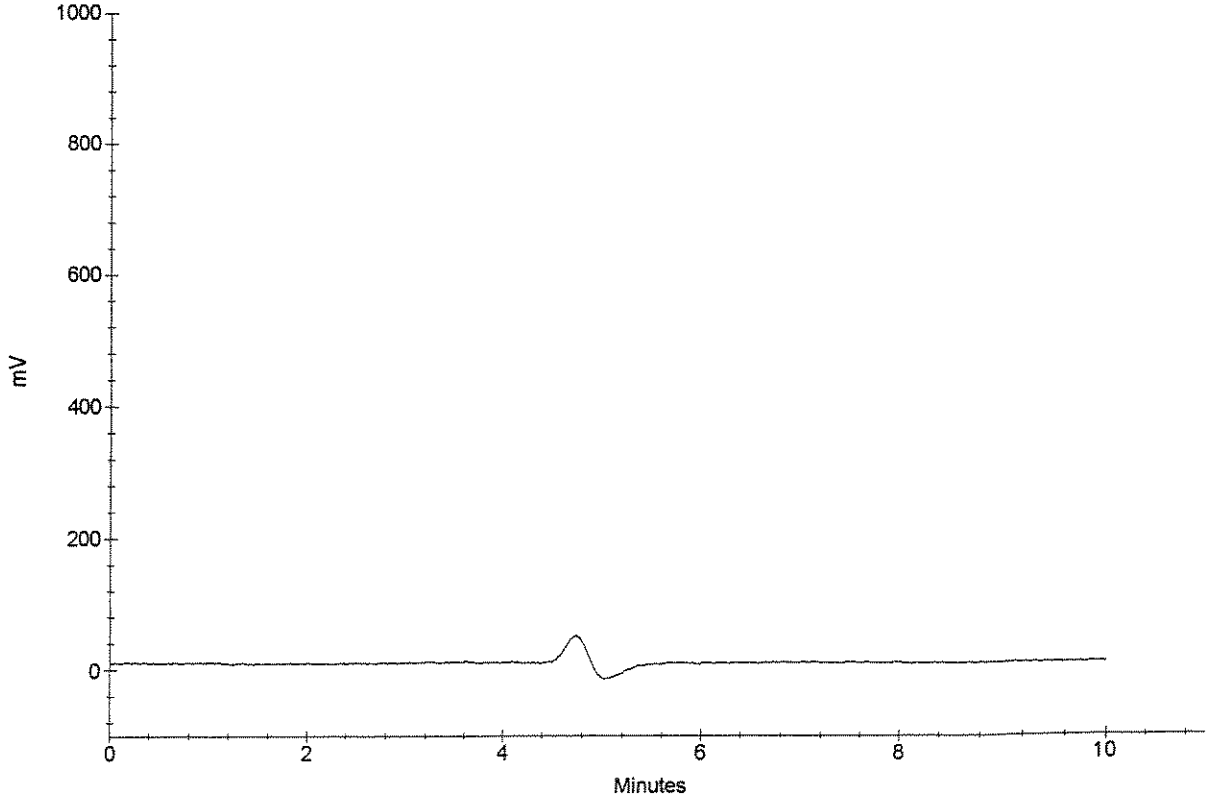
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount (PPM)	Peak Area
0	0.00	(null)		0.0000	0

OK
8/11/09

ICB



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\811_009.DXD
Method File Name : ...\Cr6-0811.met
Date Time Collected : 8/11/09 10:33:15

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 08/11/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

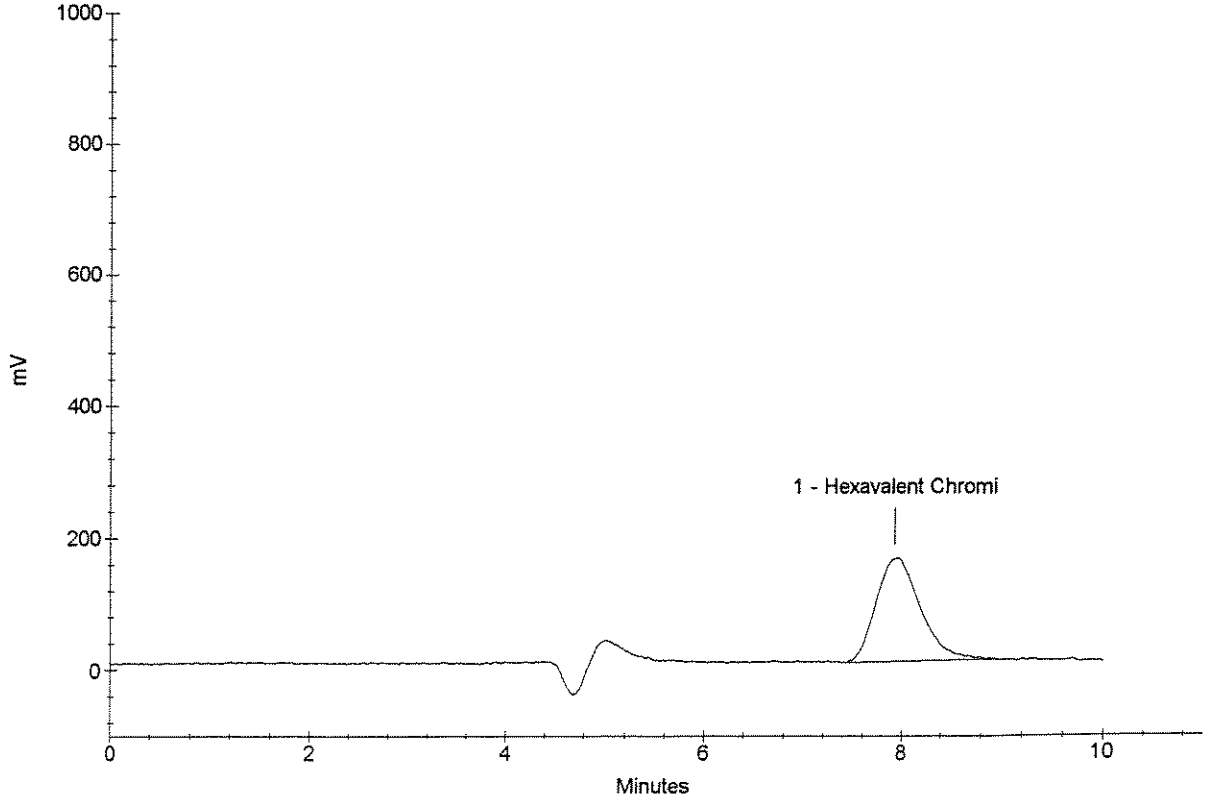
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	7.90	Hexavalent Chromi	0.1937	4878704

OK
8/11/09

LCS



DIONEX ACI METHOD PARAMETERS - CR6-0811.MET

Method Information : All Modules

System Name : Dionex 4000i
System Number : 101
Method Type : Ion Chromatography
Column : AS7 (012190) NG-1 (020261)
Analyst : CMW/CS
Comment : Cal.: IC#1, 08/11/09 50uL Loop

AI450 Detector Parameters

Detector Type : UV/Vis
Data collection time (minutes) : 10.00
Data Collection Rate : 20.00
Real time plot scale maximum (mV) : 1500.000
Real time plot scale minimum (mV) : -100.000

AI450 Integration Parameters

Peak detection algorithm : Standard
Starting peak width (seconds) : 20.00
Peak threshold : 5.00
Peak area reject (area counts) : 1000.00
Reference peak area reject (area counts) : 1000.00

AI450 Smoothing Parameters

Filter Type : No filter

AI450 Report Data

Report Format File : J:\ACQUDATA\IC\METHOD.ACI\IC#2\As7-cr6.rpt
Print Sample Analysis : Yes
Print Calibration Update : Yes
Print Check Standard : No
System Suitability Tests :
No system suitability tests selected.

AI450 Integration Data Events

Time	Description
0.00	Stop peak detection
4.40	Force baseline at start of all peaks
5.00	Double peak threshold
6.00	Start peak detection

AI450 Calibration Parameters

External or internal calibration : EXTERNAL
Number of replicates for calibration : 1
Rejection : Manual
Level Weighting : Equal
Calibration standard volume : 1.00
Default sample volume : 1.00
Amount units : PPM
Replace retention time : Yes
Update response : Yes
Default dilution factor : 1.00
Default response factor for unknown peaks : 0.00
Calculate unknowns by area or height : Area

AI450 Component Identification Table

Component	Retention	Tolerance	Reference
Hexavalent Chromi	8.27 min	1.50 min	

AI450 Component Quantitation Table

Component	Retention	Low Limit	High Limit
Hexavalent Chromi	8.27 min	0	0

AI450 Component Calibration Table

Component	Retention Time	Curve Fit	Origin	Cal. by	Response Component	Relative Factor
Hexavalent Chromi	8.27 min	Linear	Include	Area		0.00

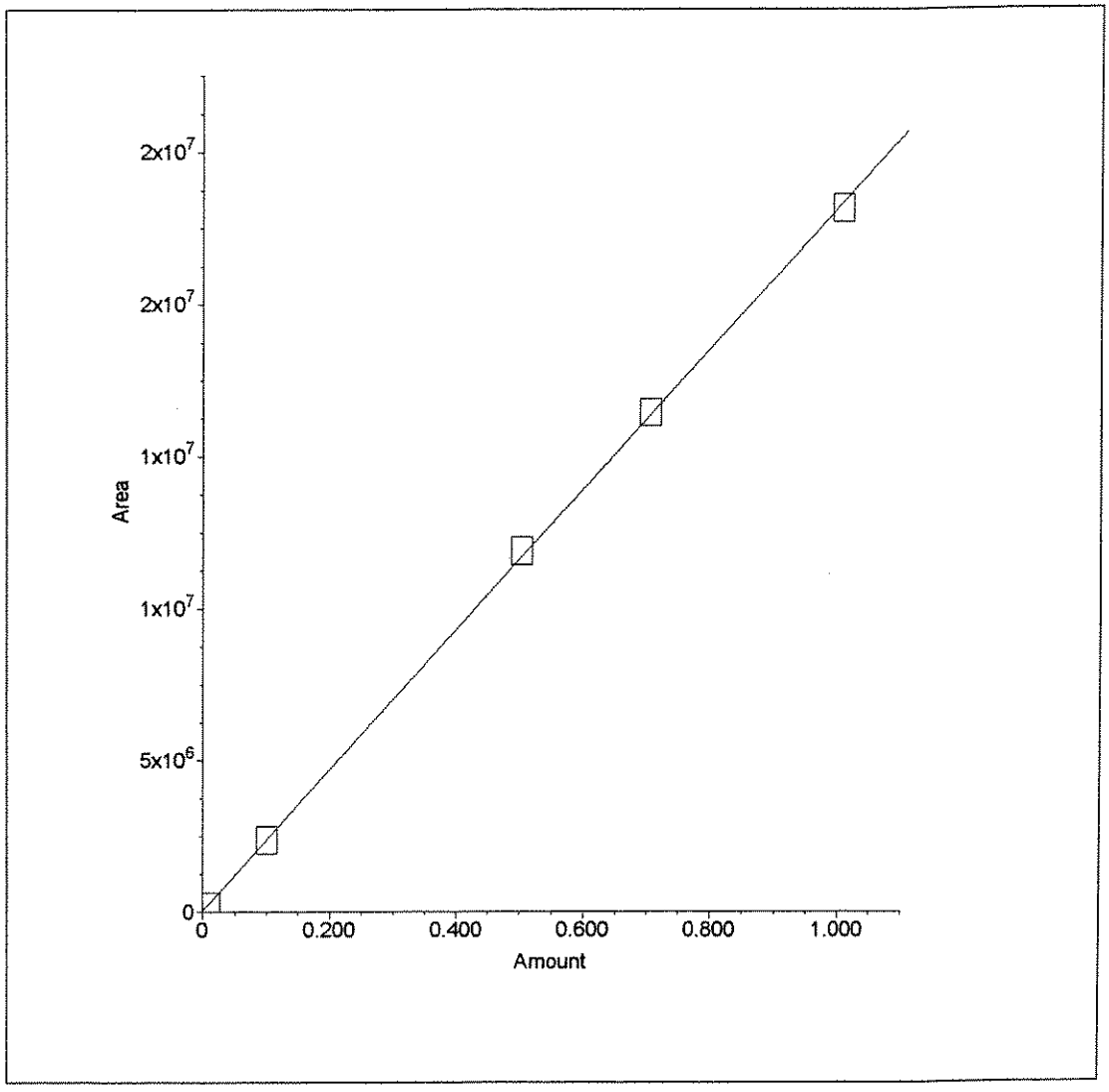
AI450 Component = Hexavalent Chromi Levels Table

Retention Time : 8.27 min
Amount units : PPM
Replicate unit type : Area
Number of levels : 6
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~16802.4~~ NO PEAK DETECTED
2	0.01	211244
3	0.10	2.54517e+006
4	0.50	1.27387e+007
5	0.70	1.75832e+007
6	1.00	2.47909e+007

AI450 XY Data Parameters

1. Component:Hexavalent Chromi
Standard:External Fit Type:Linear
Origin:Include Calibration:Area
r^2=0.999808
Amt=4.013e-008*Resp+-0.002039



Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex 1000I, IC #1

Column: AS7 Analytical Column, NG-1 Guard Column, 4mm, 06/02/08

Curve Date: 08/11/09 **Loop size:** 100 uL Loop

Analyst: C. Woods **Analysis Date:** 8/11/09

Standards Prep Dates & Log ID's:

Std Type	*Date Rec'd*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Standard Stock	02/05/09	WC85265C		Calibration Stds	08/11/09	SAME AS WC85303E
LCS / MS Soluble Stock	02/05/09	WC85265C		Soluble MS	Daily	SAME AS WC85304B
I/CCV Standard Stock	02/05/09	WC85265D		I/CCV	Daily	SAME AS WC85303F
LCS / MS Insoluble Stock	01/11/08 Soils Only	WC85095H Soils Only		Insoluble LCS/MS	Daily	SAME AS WC85304C
LCS for Waters	Daily	SAME AS WC85304A		MS for Waters	Daily	SAME AS WC85304B

Comments: _____

2/5/09 JD

Received from HACH

sh each run.

(A) 3) x 25 BOD Nutrient Buffer Pillows, Cat. 14863-98, HACH Lot # A8339, CAS as same as WC85017H. Store @ RT. Expires 12/31/2013

J NH_2SO_3 (WCES210D)

(B) (2) x 150 CLD Digestion Solution Vials, 0-1500 ppm, Cat# 21259-15, HACH Lot # A9017, CAS # same as WC85008D. Store in a cool, dark place. Expires 1/31/2014

IXR,

Received from Thermo-Fisher

(C) (1) x 500mL Chromium Reference Std Soln, 1000 mg/L. Cat# SC192-500, Fisher Lot # 076763, CAS# 7778-50-9 Store @ R.T. Expires 1/31/2010 7980

d 0.2 ml ammo (WCES2053)

Received from Environmental Express

(D) (1) x 250 mL Chromium Std Soln, 1000 mg/L. Cat # HP100012-7, EE Lot# 0804608, CAS# 7778-50-9 Store @ R.T. Expires 7/30/2010 7981

(WCES2156)

exp 2/2010

Received from VWR

(E) (1) x 500mL Phenol, liquified, Cat# PX0511-1, EMD Lot # 48112, CAS# 108-95-2. Store in flammable cabinet. Expires 2/5/2014 7983

stock (WCES048J)

exp 2/2009

(F) (1) x 6 Membrane Cap assemblies for BOD probe. Cat# YSI 5906, YSI Lot # 540 P/S 2/5/09 C8M100071. Store @ RT. Exp: not listed.

540 of H_2SO_4 · 640 at

2/5/09 (G) 0.0250 N $Na_2S_2O_3$

once Same as WCES256I. Fresh per run.

1 run.

(H) Stock Chlorine - Cl. Residual

Same as WCES256J Fresh per run

Digest

1 L

poly ppr 2/5/10

(I) DPD Indicator

Same as WCES256K Store at 4°C. Exp 2/5/10 or when discolored

2/6/09 NM

(J) 0.00564 N Sodium thiosulfate - Chlorine Demand - Same as WC85244 NM 2/6/09 Exp. 2 weeks, ~~2/20/09~~ NM 2/6/09 2/20/09.

(K) Std. KIO3 Titrant - Chlorine Demand

nm 2/6/09

00575

-109.

xdd:

xp: 1 year, 1/8/09.

-20 mL DPD;
rest w/ UPDI
1/4°C.

, #41.
1/11 90084.

9, CAS =
1/9/11

x 2.

dr run.

ine 0.553 g
dnate
SO4 (WC85027G)
@ RT
n, 2/10/08.

SO4 H)

1/10/08 (A) DPD Indicator — TC 1/10/08

TC Dissolve a 500 mL vol. flask, dissolve 0.50g DPD (WC76015F) and 0.100g EDTAC and 4mL 1+3 H_2SO_4 (WC85027G) in UPDI, Bring to vol. Store @ RT in amber glass Exp 1 yr. or when discolored, 1/10/09

1/10/08 NM (B) Sodium Phenolate - NH3
- same as WC85088F. Exp. 1 year, 1/10/09.

1/11/08 NM (C) Eriochrome Black-T Indicator (Hardness)
- same as WC85075H. Exp. 5/31/08.

1/11/08 KB (D) ISS Reference
0.2152g Kudin (WC69285G) brought to 1000g w/ DI.
Store at 4°C in a plastic bottle.
Tv = 215 mg/L exp: 01/11/09

1/11/08 TC 1/11/08 (E) Crest Soils Buffer
In a 500 mL vol. flask dissolve
- 43.545g K_2HPO_4 (WC76227G)
- 34.02g KH_2PO_4 (WC85054G)
in ~400 mL DI. Bring to vol. w/ DI. Store @ 4°C.
Exp. 1 yr. 1/11/09.

(F) Crest Soils Digest Solution
20.0g NaOH pellets (WC85072G) and 30.0g Na_2CO_3 (WC76232D) dissolved in DI. Bring to 1 liter volumetrically w/ DI.
Exp. 1 month, 2/11/08.

1/11/08 (E') 0.0250 $Na_2S_2O_3$ - Sulfides
TC Dilute 50 mLs 10N $Na_2S_2O_3$ (WC85067D) → 200 mLs volumetrically w/ DI. Store for 2 weeks @ 4°C. Exp. 1/25/08.

1/11/08 BB Received from Alfa Aesar
(H) (1) x 100g Lead II Chromate, Cat # 14125, Lot # J03Q003, CAS # 7758-97-6. Store @ R.T. Expires 1/11/2013 BB 10/19/07 criteria changed

20576

CMW 5/15/09

Ⓐ Cr^{6+} 7199 Elvent

Dissolve 33g of Ammonium Sulfate (WC85040B) in 500mL of DI and add 6.5mL of Ammonium hydroxide (WC85188I). Dilute to 1L volumetrically w/ DI. Degas prior to use. Store @RT. Expires 6/15/09.

Ⓑ Cr^{6+} 7199 Post-Column Color Reagent

Dissolve 0.5g of 1,5-diphenylcarbohydrazide (WC85190E) in 100mL HPLC grade methanol (WC85284G) in a 1L volumetric flask. In a separate container add about 500mL DI then add 28mL of conc. H_2SO_4 (WC85276C), mix + degas before adding to diphenylcarbohydrazide solution. Dilute to volume w/ DI water. Store @ 4°C. Degas prior to use. Expires ~~6~~ 5/15/09 6/15/09.

Cr^{6+} 7199/218.6 Calibration on IC #5

Ⓒ 10ppm Standard Working Stock

Do two(2) 1/10 serial dilutions of 1000ppm Std. Stock (WC85265C). Prepare as needed.

Ⓓ 10ppm Reference Working Stock

Do two (2) 1/10 serial dilutions of 1000ppm Ref. Stock (WC85265D). Prepare as needed.

Ⓔ Calibration Standards

Std #		mLs 10ppm Std. (WC85303C)	mLs DI	concentration (ppm)
6		1.0	9.0	1.00
5		0.70	9.3	0.70
4	5/15/09	~~0.10~~ 0.50	~~9.9~~ 9.5	~~0.10~~ 0.50
3		0.10	9.9	0.10
2	——	1/10 dilution of Std. #3	——	0.010
1		0.0	10	0.00

Ⓕ ICV|CCV (TV=0.50ppm) [waters + Soils]

To 9.5mLs of DI add 0.5mLs of 10ppm Reference Stock (WC85303D). Mix + analyze. Prepare as needed.

CMW 5/15/09

Ⓐ LCS for Cr^{6+} Waters (TV = 0.2 ppm)

To 10mL of DI water, add 0.2mL of 10ppm Std. ~~Stoc~~ CMW 5/15/09 (WC85303C). Mix thoroughly. Prepare as needed.

Ⓑ Matrix Spike for Cr^{6+} Waters (TV = 0.2ppm)

To 10mL of sample, add 0.2mL of 10ppm Std. (WC85303C). Mix thoroughly + analyze.

Ⓒ LCS for Cr^{6+} Soils

To digestate add approximately 10mg of Lead (II) Chromate (WC85095H) + digest as normal.

$$TV = \frac{(mg\ PbCrO_4)}{(kg\ sample)} \times 0.161$$

Ⓓ Matrix Spike for Cr^{6+} Soils

To digestate add approximately 10mg of Lead (II) Chromate (WC85095H) + digest as normal.

$$TV = \frac{(mg\ PbCrO_4)}{(kg\ sample)} \times 0.161$$

Ⓔ Post-Verification Spike (PVS) for Cr^{6+} Soils

A - If a sample has no value, take a 45mL aliquot of digestate and add 0.45mLs of 100ppm Std. (WC85304F). Analyze as usual. TV = 1.00ppm (Needs to be run @ dilution on IC)

B - If a sample has a value, use the following to determine the amount of spike.

$$(\text{Amount of spike, mL}) = \frac{(45\text{mLs})(2)(\text{Sample Value, mg/L})}{(100\ \text{ppm})}$$

Spike a 45mL aliquot w/ the calculated amount of 100ppm Standard (WC85304F). Spike with whichever amount is greater, A or B.

Ⓕ 100ppm Standard Working Stock

Do a 1/10 serial dilution of 1000ppm Standard Stock (WC85265C). Prepare fresh as needed

Revi

Limits for DI Water if pH < 5.5, or > 7.5 Notify QA!

Limits for Spec. Cond. >= 1 - Notify QA! (Limit is 2 umohs/cm)

Conductivity holding time is 48 hrs from sample date

pH holding time is 15 minutes from collection

Date: 9/1/09 pg.1

Sub. #	Order #	pH 150.1/4500H+B 9040B	Corrsivity 9045C	CONDUCTVITY 120 raw data	units	mhos/cm	TEMP °C	Analyst	Time	HT** (y/n	Meter J/VWR
CCB	DI H_2O	7.192		0.418	uS	0.418	25°	RJ	1805		J
R09-4963	001	6.851		0.312	uS	0.312	18°			Y	
	002	~~6.553~~ 6.399		0.417	uS	0.417					
	003	~~6.442~~ 6.235		0.391	uS	0.391					
	003dup	6.284		0.365	uS	0.365					
	004	6.181		0.366	uS	0.366					
RQ0908043	01			4.05	uS	4.05	19°				
RQ0908042	01			5.90	uS	5.90					
R09-4817	001			0.420	mS	420					
	002			0.389	mS	389					
CDC	1		9.079								
	2		9.073								
	3		9.090								
	4		9.085								
R09-4948	006	5.183									
R09-4939	001	7.438									
R09-4950	002	5.472					20°				
R09-4943	001	7.409									
CCV	10.0	10.039		151.9	uS	151.9					
CCB				0.551	uS	0.551					
R09-4948	001		8.833								
	002		8.259								
	002dup		8.249								

*Meters used will be designated by "J" for Jenway or "VWR" for the VWR meter, **HT = holding time

pH Meter Calibration

STANDARDS ~~RQ4.00~~ 4.01 ✓ ~~RQ10.00~~ 10.01 ✓ 6.998 ICV check 7.00 ↓ TEMP. 19.6°C

LOT # : BDB2694H BDB2695A BDB2694I

Conductivity Meter Calibration (calibrate to 1412 and test 2767 & 146.9 standard)

N **KCL:** 1412 **Calibrated** (Yes) / NO) **LOT # :** BDB2692D

Cell Constant: 1.139

N **KCL:** 2767 **LOT # :** BDB2695D **Reading** 2670

10% Limits: 2490.3 to 3043.7

N **KCL:** 146.9 **LOT # :** BDB2694B **Reading** 151.7

10% Limits: 132.2 TO 161.6

uS = 1 umhos/cm mS = 1,000 umhos/cm S = 1,000,000 umhos/cm

Analyst: RJ DATE: 9/1/09 TIME: 1800

0055

Limits for DI Water if pH < 5.5, or > 7.5 Notify QA!

Limits for Spec. Cond. >= 1 - Notify QA! (Limit is 2 umohs/cm)

Conductivity holding time is 48 hrs from sample date

pH holding time is 15 minutes from collection

Date: 9/1/09 pg 2

Sub. #	Order #	pH 150.1/4500H+B 9040B	Corrsivity 9045C	CONDUCTVITY 120 raw data	units	mhos/cm	TEMP °C	Analyst	Time	HT** (y/n	Meter J/VWR
R09-4948	003		8.198				20°	RG	1805	Y	J
↓	004		8.090				↓	↓	↓	↓	↓
↓	005		7.956								
R09-4942	001	7.845									
↓	001 dup	7.851									
↓	002	7.729								↓	
CCV	4.0	4.017					↓	↓	↓		↓

RG 9/1/09

*Meters used will be designated by "J" for Jenway or "VWR" for the VWR meter, **HT = holding time

pH Meter Calibration

STANDARDS 4.00 _____ 10.00 _____ ICV check 7.00 _____ TEMP. _____

LOT # : _____

Conductivity Meter Calibration (calibrate to 1412 and test 2767 & 146.9 standard)

N **KCL:** 1412 **Calibrated (Yes / NO)** **LOT # :** _____

Cell Constant: _____

N **KCL:** 2767 **LOT # :** _____ **Reading** _____

10% Limits: 2490.3 to 3043.7

N KCL: 146.9 **LOT # :** _____ **Reading** _____

10% Limits: 132.2 TO 161.6

uS = 1 umhos/cm mS = 1,000 umhos/cm S = 1,000,000 umhos/cm

Analyst: DATE: TIME:

RG 9/1/09

on previous page

Analytical Results Summary

Instrument Name: R-Discrete-01 **Analyst:** HLOVEJOY **Analysis Lot:** 169015 **Method/Testcode:** 335.4/CN T

ab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
.Q0908218-01	Cyanide, Total	MB		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			9/3/09 17:46:01	N	II
.Q0908218-01	Cyanide, Total	MB		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			9/3/09 17:46:01	N	II
.Q0908218-02	Cyanide, Total	LCS		Water	0.09 mg/L	50 mL	0.0900 mg/L	1	0.010	90		9/3/09 17:46:02	N	II
.Q0908218-02	Cyanide, Total	LCS		Water	0.09 mg/L	50 mL	0.0900 mg/L	1	0.010	90		9/3/09 17:46:02	N	II
.Q0908218-03	Cyanide, Total	LCS		Water	0.37 mg/L	50 mL	0.369 mg/L	1	0.010	92		9/3/09 17:46:03	N	II
.Q0908218-03	Cyanide, Total	LCS		Water	0.37 mg/L	50 mL	0.369 mg/L	1	0.010	92		9/3/09 17:46:03	N	II
.0904942-002	Cyanide, Total	N/A		Water	0.02 mg/L	50 mL	0.016 mg/L	1	0.010			9/3/09 17:46:04	N	II
:Q0908218-04	Cyanide, Total	DUP	R0904942-002	Water	0.01 mg/L	50 mL	0.014 mg/L	1	0.010		9	9/3/09 17:46:05	N	II
:Q0908218-05	Cyanide, Total	MS	R0904942-002	Water	0.08 mg/L	50 mL	0.0773 mg/L	1	0.010	62		9/3/09 17:46:06	N	II
:0904948-009	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			9/3/09 17:46:07	N	IV
:0904982-001	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			9/3/09 17:46:08	N	II
:0904985-001	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			9/3/09 17:46:09	N	II
:Q0908042-01	Cyanide, Total	MB		Soil	0.00 mg/L	50.000 mL	0.010 mg/L U	1	0.010			9/3/09 17:53:35	N	IV
:Q0908291-01	Cyanide, Total	LCS		Soil	0.09 mg/L	50 mL	0.0900 mg/L	1	0.010	90		9/3/09 17:46:02	N	IV
:Q0908291-02	Cyanide, Total	LCS		Soil	0.37 mg/L	50 mL	0.369 mg/L	1	0.010	92		9/3/09 17:46:03	N	IV
:0904817-001	Cyanide, Total	N/A		Soil	0.00 mg/L	50.000 mL	0.010 mg/L U	1	0.010			9/3/09 17:53:38	N	IV
:Q0908043-01	Cyanide, Total	MB		Soil	0.00 mg/L	50.000 mL	0.010 mg/L U	1	0.010			9/3/09 17:53:39	N	IV
:0904817-002	Cyanide, Total	N/A		Soil	0.00 mg/L	50.000 mL	0.010 mg/L U	1	0.010			9/3/09 17:53:40	N	IV

R4894
R4948
R4982
R4817
R4769
R4843

6 copies

Reviewed & Approved
OK
By: _____
Date: 9/8/09

Preparation Information Benchsheet

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matta Cary Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:32

[redacted]ls/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: DBond Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 95288
Team: GenChem/HLOVEJOY

Prep WorkFlow: Gen Dist CN
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/3/09 09:00 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908218-01	MB		50mL	335.4/CN T				50.00mL			
2	RQ0908218-01	MB		50mL	9012A/CN Tot				50.00mL			
3	RQ0908218-02	LCS		50mL	335.4/CN T				50.00mL		0.5000 mL/11016	
4	RQ0908218-02	LCS		50mL	9012A/CN Tot				50.00mL		0.5000 mL/11016	
5	RQ0908218-03	LCS		50mL	335.4/CN T				50.00mL		2.0000 mL/11016	
6	RQ0908218-03	LCS		50mL	9012A/CN Tot				50.00mL		2.0000 mL/11016	
7	R0904942-002	Leachate Discharge - Total	.05	50mL	335.4/CN T				50.00mL			
8	RQ0908218-04	R0904942-002 DUP	.05	50mL	335.4/CN T				50.00mL			
9	RQ0908218-05	R0904942-002 MS	.05	50mL	335.4/CN T				50.00mL		0.5000 mL/11016	
10	R0904948-009	EB090109-SO1	.17	50mL	9012A/CN Tot				50.00mL			
11	R0904982-001	Phase-1, Cell-1 Secondary Leachate Exceedence	.16	50mL	9012A/CN Tot				50.00mL			
12	R0904985-001	B-11B	.15	50mL	9012A/CN Tot				50.00mL			
13	RQ0908042-01	MB	.08	50.000mL	9012A/CN Tot SPLP				50.00mL			
14	R0904817-001	SA64-10BSPLP2	.11	50.000mL	9012A/CN Tot SPLP				50.00mL			
15	RQ0908043-01	MB	.08	50.000mL	9012A/CN Tot SPLP				50.00mL			
16	R0904817-002	SA64-10BSPLP3	.16	50.000mL	9012A/CN Tot SPLP				50.00mL			

Spiking Solutions

Name: Cyanide 10 ppm as CN Inventory ID 11016 Logbook Ref: FRESH PER RUN Expires On: 07/10/2010

Preparation Steps

Step: Distillation
Started: 9/3/09 09:00
Finished: 9/3/09 17:51
By: HLOVEJOY

Comments: _____

Reviewed By: _____ Date: _____ Spike Witness: SROBINSON Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Calibration results AquaKem 7.0 Page: 1

Columbia Analytical Services
Rochester, NY 14607
Analyst: [illegible]
Pipette: [illegible]

9/3/2009 17:27

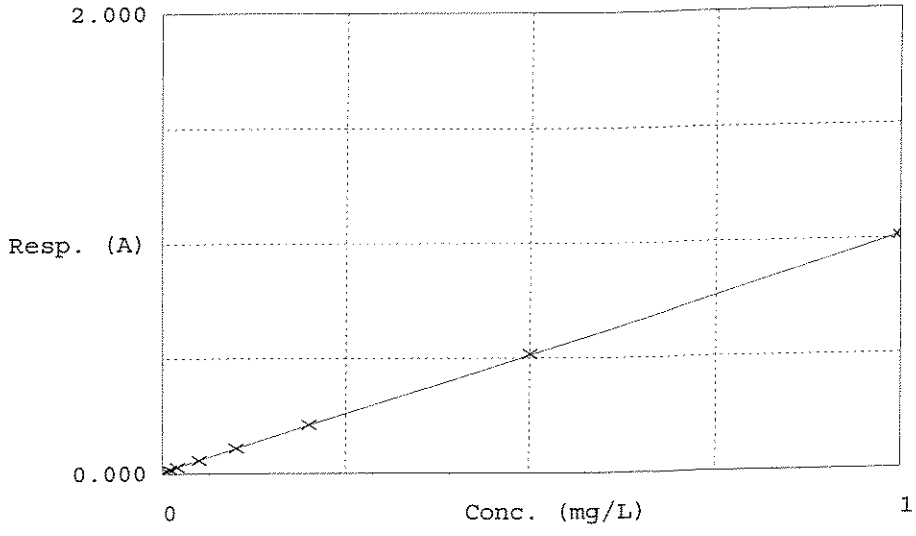
Test TCN

Accepted 9/3/2009 17:27

Factor 0.99242
Bias 0.00901

Coeff. of det. 0.999949

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN- 0	0.00766	-0.00134	0.00000	
2	CN- 0.01	0.01775	0.00867	0.01000	
3	CN- 0.02	0.02841	0.01925	0.02000	
4	CN- 0.05	0.05830	0.04892	0.05000	
5	CN- 0.10	0.11044	0.10066	0.10000	
6	CN- 0.20	0.21203	0.20148	0.20000	
7	CN- 0.5	0.51814	0.50527	0.50000	
8	CN- 1.0	1.01372	0.99709	1.00000	
9	1 ICV-TCN(contr	0.52709	0.51415	0.50000	
10	2 ICB-TCN(contr	0.01019	0.00117	0.00000	

Columbia Analytical Services
Rochester, NY 14607
Analyst: Hlevesey
Pipette: 01 Blue

Date : 9/3/2009
Time : 18:30

Test TCN
Unit mg/L

Sample ID:	Resp.	Result	Man.dilut	Dilut	Date and Time
~~3 CCV-TCN~~	~~0.517~~	~~0.49550~~			9/3/2009 15:04
4 CCB-TCN	0.009	0.00067			9/3/2009 15:04
LL1	0.103	0.09211			9/3/2009 15:04
HL1	0.397	0.37910			9/3/2009 15:04
LL2	0.105	0.09398			9/3/2009 15:04
HL2	0.407	0.38836			9/3/2009 15:04
3 CCV-TCN	0.538	0.51600			9/3/2009 15:06
4 CCB-TCN	0.008	-0.00070			9/3/2009 15:06
3 CCV-TCN	0.522	0.50050			9/3/2009 15:46
4 CCB-TCN	0.009	0.00024			9/3/2009 15:46
LL3	0.108	0.09669			9/3/2009 15:46
HL3	0.416	0.39694			9/3/2009 15:46
3 CCV-TCN	0.542	0.52034			9/3/2009 15:48
4 CCB-TCN	0.009	-0.00001			9/3/2009 15:48
1 ICV-TCN	0.528				-
~~2 ICB-TCN~~	~~0.010~~				-
1 ICV-TCN	0.527	0.51415			9/3/2009 17:27
2 ICB-TCN	0.010	0.00117			9/3/2009 17:27
3 CCV-TCN	0.529	0.51639			9/3/2009 17:45
4 CCB-TCN	0.009	0.00040			9/3/2009 17:46
PB	0.008	-0.00053			9/3/2009 17:46
LCS-LL	0.100	0.08999			9/3/2009 17:46
LCS-HL	0.380	0.36859			9/3/2009 17:46
R0904942-002	0.025	0.01553			9/3/2009 17:46
4942-002 DUP	0.023	0.01424			9/3/2009 17:46
4942-002 SPK	0.087	0.07730			9/3/2009 17:46
R0904948-009	0.008	-0.00103			9/3/2009 17:46
R0904982-001	0.012	0.00270			9/3/2009 17:46
~~R0904895-001~~	~~0.008~~	~~-0.00062~~			9/3/2009 17:46
8042-01 MB SPLP	0.009	0.00008			9/3/2009 17:53
3 CCV-TCN	0.521	0.50836			9/3/2009 17:53
4 CCB-TCN	0.009	-0.00039			9/3/2009 17:53
R0904817-001	0.008	-0.00110			9/3/2009 17:53
8043-01 MB SPLP	0.008	-0.00130			9/3/2009 17:53
R0904817-002	0.008	-0.00090			9/3/2009 17:53
PB SOIL	0.008	-0.00093			9/3/2009 17:53
LCS-LL SOIL	0.103	0.09372			9/3/2009 17:53
LCS-HL SOIL	0.399	0.38744			9/3/2009 17:53
R0904776-034	0.009	0.00003			9/3/2009 17:53
R0904776-035	0.009	-0.00010			9/3/2009 17:53
R0904776-036	0.012	0.00324			9/3/2009 18:01
R0904776-045	0.011	0.00244			9/3/2009 18:01
3 CCV-TCN	0.522	0.50939			9/3/2009 18:01
4 CCB-TCN	0.009	-0.00001			9/3/2009 18:01
R0904769-022	0.008	-0.00091			9/3/2009 18:01
4769-022 DUP	0.009	-0.00032			9/3/2009 18:01
4769-022 SPK	0.108	0.09796			9/3/2009 18:01
R0904769-023	0.008	-0.00054			9/3/2009 18:01
R0904769-024	0.008	-0.00069			9/3/2009 18:01
R0904769-025	0.008	-0.00070			9/3/2009 18:01

OK 9/7/09

4925-001 analyzed on different instrument OK 9/8/09

Columbia Analytical Services
Rochester, NY 14607
Analyst: HLovejoy
Pipette: 01 Blue

Date : 9/3/2009
Time : 18:30

Test TCN
Unit mg/L

Sample ID:	Resp.	Result	Man.dilut	Dilut	Date and Time
R0904843-024	0.008	-0.00123			9/3/2009 18:01
R0904843-025	0.008	-0.00095			9/3/2009 18:08
R0904894-002	0.009	-0.00018			9/3/2009 18:08
R0904894-003	0.009	0.00036			9/3/2009 18:08
3 CCV-TCN	0.522	0.50861			9/3/2009 18:08
4 CCB-TCN	0.009	0.00019			9/3/2009 18:08
R0904894-004	0.008	-0.00083			9/3/2009 18:08
4894-004 DUP	0.008	-0.00066			9/3/2009 18:08
4894-004 SPK	0.110	0.10069			9/3/2009 18:08
R0904894-005	0.008	-0.00095			9/3/2009 18:08
R0904894-006	0.007	-0.00180			9/3/2009 18:08
R0904894-007	0.008	-0.00136			9/3/2009 18:08
R0904894-008	0.008	-0.00076			9/3/2009 18:16
PB SOIL 2	0.009	-0.00025			9/3/2009 18:16
LCS-LL SOIL 2	0.103	0.09341			9/3/2009 18:16
LCS-HL SOIL 2	0.400	0.38758			9/3/2009 18:16
3 CCV-TCN	0.522	0.50899			9/3/2009 18:16
4 CCB-TCN	0.009	-0.00049			9/3/2009 18:16
R0904894-009	0.008	-0.00115			9/3/2009 18:16
4894-009 DUP	0.008	-0.00127			9/3/2009 18:16
4894-009 SPK	0.102	0.09238			9/3/2009 18:16
R0904894-010	0.008	-0.00092			9/3/2009 18:16
R0904894-011	0.008	-0.00123			9/3/2009 18:16
R0904894-016	0.008	-0.00100			9/3/2009 18:23
R0904894-017	0.008	-0.00060			9/3/2009 18:23
R0904948-010	0.008	-0.00085			9/3/2009 18:23
R0904948-011	0.008	-0.00087			9/3/2009 18:23
R0904948-012	0.010	0.00062			9/3/2009 18:23
3 CCV-TCN	0.533	0.51971			9/3/2009 18:23
4 CCB-TCN	0.009	-0.00028			9/3/2009 18:23
R0904948-013	0.008	-0.00058			9/3/2009 18:23
R0904948-014	0.008	-0.00122			9/3/2009 18:24
R0904948-015	0.008	-0.00137			9/3/2009 18:24
R0904948-016	0.008	-0.00138			9/3/2009 18:24
R0904948-017	0.008	-0.00097			9/3/2009 18:27
4948-017 DUP	0.008	-0.00075			9/3/2009 18:27
4948-017 SPK	0.108	0.09846			9/3/2009 18:27
3 CCV-TCN	0.557	0.54416			9/3/2009 18:30
4 CCB-TCN	0.009	-0.00041			9/3/2009 18:30

Midi-Cyanide Distillation Sheet

Stock ppm: 10116317

Analyst: [illegible]

Date Std'n: 9/16/09

Date: 9/3/09

10 ppm Spike Solution:

Chiller Temp: 6°C

Date made: 9/1/09

Midi Block #1 Temp: 140°C

mL used: 0.2839

Midi Block #2 Temp: 135°C

Pipette ID:

Spk witness:

Still #	QC type	Order #	Dist. Vol.	Final Vol.	Method	pH	H2S +/-	Comments
1	Prep Blk		50	50	335.4/9012	NA	-	
2	LCS-LL		50	50	335.4/9012	NA	-	+ 0.5 ml 10 ppm
3	LCS-HL		50	50	335.4/9012	NA	-	+ 2.0 ml 10 ppm
4		R0904942-002	50	50	335.4	7	-	
5		4942-002 DUP	50	50	335.4	7	-	
6		4942-002 SPK	50	50	335.4	7	-	+ 0.5 ml 10 ppm
7		R0904948-009	50	50	9012	12	-	
8		R0904982-001	50	50	9012	7	-	
9		R0904985-001	50	50	9012	12	-	
10	8042-01	MB SPLP 1	50	50	9012	12	-	
11		R0904817-001	50	50	9012	12	-	
12	8043-01	MB SPLP 2	50	50	9012	12	-	
13		R0904817-002	50	50	9012	12	-	
14	Prep Blk		1.0	50	9012	NA	-	
15	LCS-LL		1.0	50	9012	NA	-	+ 0.5 ml 10 ppm
16	LCS-HL		1.0	50	9012	NA	-	+ 2.0 ml 10 ppm
17		R0904776-034	1.10	50	9012	NA	-	
18		R0904776-035	1.45	50	9012	NA	-	
19		R0904776-036	1.94	50	9012	NA	-	
20		R0904776-045	1.59	50	9012	NA	-	

Midi-Cyanide Distillation Sheet

Stock ppm:_____

Analyst: Hoagey

Date Std'n:_____

Date: 9/3/09

10 ppm Spike Solution:

Chiller Temp: 8°C

Date made: _____

Midi Block #1 Temp: 140°C

mL used: _____

Midi Block #2 Temp: 135°C

Pipette ID: _____

spk witness

Still #	QC type	Order #	Dist. Vol.	Final Vol.	Method	pH	H2S +/-	Comments
1		R0904769-022	1.03	50	9012	NA		
2		4769-022 DUP	1.03	50	9012	NA		
3		4769-022 SPK	1.03	50	9012	NA		+ 0.5 ml 10 ppm
4		R0904769-023	1.00	50	9012	NA		
5		R0904769-024	1.04	50	9012	NA		
6		R0904769-025	1.05	50	9012	NA		
7		R0904843-024	1.02	50	9012	NA		
8		R0904843-025	1.11	50	9012	NA		
9		R0904894-002	1.15	50	9012	NA		
10		R0904894-003	1.41	50	9012	NA		
11		R0904894-004	1.25	50	9012	NA		
12		4894-004 DUP	1.12	50	9012	NA		
13		4894-004 SPK	1.09	50	9012	NA		+ 0.5 ml 10 ppm
14		R0904894-005	1.08	50	9012	NA		
15		R0904894-006	1.43	50	9012	NA		
16		R0904894-007	1.07	50	9012	NA		
17		R0904894-008	1.06	50	9012	NA		
18								
19			CAN 9/3/09					
20								

Midi-Cyanide Distillation Sheet

Stock ppm:_____

Analyst: Hoegy

Date Std'n:_____

Date: 9/3/09

10 ppm Spike Solution:

Chiller Temp: 2°C

Date made: _____

Midi Block #1 Temp: 140C

mL used: _____

Midi Block #2 Temp: 135C

Pipette ID: _____

Spk witness:

Still #	QC type	Order #	Dist. Vol.	Final Vol.	Method	pH	H2S +/-	Comments
1	Prep Blk		1.0	50	9012	NA		
2	LCS-LL		1.0	50	9012	NA		+ 0.5 ml 10 ppm
3	LCS-HL		1.0	50	9012	NA		+ 2.0 ml 10 ppm
4		R0904894-009	1.09	50	9012	NA		
5		4894-009 DUP	1.05	50	9012	NA		
6		4894-009 SPK	1.03	50	9012	NA		+ 0.5 ml 10 ppm
7		R0904894-010	1.06	50	9012	NA		
8		R0904894-011	1.44	50	9012	NA		
9		R0904894-016	1.03	50	9012	NA		
10		R0904894-017	1.12	50	9012	NA		
11		R0904948-010	1.00	50	9012	NA		
12		R0904948-011	1.04	50	9012	NA		
13		R0904948-012	1.02	50	9012	NA		
14		R0904948-013	1.18	50	9012	NA		
15		R0904948-014	1.20	50	9012	NA		
16		R0904948-015	1.02	50	9012	NA		
17		R0904948-016	1.01	50	9012	NA		
18		R0904948-017	1.14	50	9012	NA		
19		4948-017 DUP	1.03	50	9012	NA		
20		4948-017 SPK	1.00	50	9012	NA		+ 0.5 ml 10 ppm

* Lost chiller power with 50mm left

Columbia Analytical Services
1 Mustard St., Rochester NY

General Chemistry Analytical Run Cover Sheet

Analyst: H. Lovejoy Distillation Date: 9/3/09

Analysis: Total Cyanide Instrument: AquaKem 200 Analyzer Date: 9/3/09

Quality Control:

	Same as Log #, Date	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol mLs	True Value (mg/L)
a) Stds. Prep. :	WC85134D, 4/3/08				
10 ppm Working Stock:	WC85134B, 4/3/08	0.9839	1016.371	100	10.0
b) I/CCV (Ref.) Prep.:	WC92067D, 8/20/09	0.5	10	10	0.500
10 ppm Working Stock:	WC85134C, 4/3/08	0.98	1020.365	100	10.0
c) LCS (water) Prep:	WC69160D , 8/02/04	2.0	10	50	0.4
LCS (water) Prep:	WC69160C , 8/02/04	0.5	10	50	0.1
LCS (soil) Prep. :	WC69160D , 8/02/04	2.0	10	~1 g.	~ 20 (see bench sheet)
LCS (soil) Prep:	WC69160C , 8/02/04	0.5	10	~1 g.	~ 5 (see bench sheet)
d) Mtx Spk (water) Prep:	WC69160E , 8/02/04	0.5	10	50	0.1
Mtx Spk (soil) Prep:	WC69160E , 8/02/04	0.5	10	~1 g.	~5 (see bench sheet)

Method Reference: 335.2 EPA 600; 9010A,9012 EPA SW-846; 335.2 CLP-M NYSASP

Instrument log filled in? (Y) (N)

Stock Prep:
1000 mg/L TCN Std. Stock prepared 7/10/09, WC92037C, standardized 7/10/09, WC91033A
1000 mg/L TCN Ref. Stock prepared 7/10/09, WC92037D, standardized 7/10/09, WC91033B

10 mg/L Std. And Ref. working stocks are prepared weekly using the above stock solutions, diluting to volume with 0.25N NaOH

0.25N NaOH, fresh daily: 26.14 mL 50% w/w NaOH WCC85271B diluted to 2L with DI

Reagents, Distillation:	**Log Book #**	**Comments**
Sulfamic Acid	WC92070A	
Sulfuric Acid, 1:1	WC92071B	
Magnesium Chloride	WC92070B	
Calcium Hypochlorite	NA	
Ascorbic Acid	NA	
Acetate Buffer	NA	
Zinc Acetate	NA	
Acetic Acid	NA	
Cadmium Carbonate	NA	
Anti-foam	WC92065F	

Reagents, Autoanalyzer:		
Buffer		
Pyridine Barbituric Acid		

Chloramine-T, fresh daily: 2.00 g Chloramine-T WC76197G diluted to 200 mL with DI

Comments:

4/3/08 (A) 0.25N NaOH
26.14 mls conc. NaOH (WC85011C) → Liter w/ DI.
Fresh per run.

(B) 10ppm TCN Std. Stock
1.022 mls of the 978.432 ppm TCN Std. Stock (WC85007E)
→ 100 mls w/ 0.25N NaOH (WC85134A)

(C) 10ppm TCN Ref. Stock
1.002 mls of the 998.4 ppm TCN Ref. Stock (WC85007F)
→ 100 mls w/ 0.25N NaOH (WC85134A)

(D) TCN Calibration Stds. Fresh per run

Conc.	mls 10ppm TCN Std. Stock (WC85134B)	mls 0.25N NaOH
1.00	1.0	9.0
0.50	0.50	9.50
0.20	0.20	9.80
0.10	1/10 dilution of 1.00 ppm Std	
0.05	1/10 dilution of 0.50 ppm Std	
0.02	1/10 dilution of 0.20 ppm Std	
0.01	1/10 dilution of 0.10 ppm Std	
0.00	0.00	10.0

(E) ICV/CCV TV=0.70 Fresh per run
0.70 mls 10ppm TCN Ref. Stock (WC85134C) + 9.30 mls
0.25N NaOH (WC85134A)

4/3/08 Nm (F) NH_3 Carrier/Diluent
-same as WC85073F. Prepared solution X 3.

(G) Hypochlorite - NH_3
-same as WC85109F. Prepare fresh each run.

4/3/08 (F) Iodide - Iodate Titrant - Sulfite
[illegible] g KIO_3 (WC85006E) + 4.25 g KI (WC76272E) + 0.310 g $NaHCO_3$ (WC76115E)
dissolved in DI in 1L volumetric flask and brought to volume. Store at 4 C exp 4/3/09

(G) Ascorbic Acid [illegible]
Same as WC85113C Store at 4 C exp 2 weeks 4/17/08

4/3/08 AB Received
(A) [illegible]
(B) [illegible]
Received
(C) [illegible]

4/4/08 Nm (D) Post-
To a [illegible]
(WC851[illegible]
Pour off
w/ UP DI

(E) Hypochl
-same a

4/4/08 Nm (F) Color
To a
-75.0 g
-0.50 g
-454 g
Stir unt

(G) Buffer-
-same as

4/8/08 Nm (H) Post-T
-same a

(I) Hypochl
-same a

8/2/04 CMW

TCN Distillation

(A) 0.25N NaOH

- 40.0mLs NaOH (WC69074F, EM Lot # 3321) → 2 Liters w/ DI. Make fresh each run.

(B) TCN 10ppm working Stock (for LCS/MS/STANDARDS)

- 1.020mL TCN Std. Stock #1 (WC69154D), Standardization WC71016A → 100mL w/ 0.25 NaOH (WC69160A). Prepare fresh weekly. Store in amber glass @ 4°C.

(C) TCN Low Level LCS:

Add 0.50mL 10ppm working Standard Stock (WC69160B) to 50mL DI. TV = 0.100ppm. For soils, add 1.0g Ottawa sand to 50.0mL DI and 0.50mL 10ppm Standard working stock (WC69160B). TV = 5.0ppm.

(D) TCN High Level LCS:

Add 2.0mL 10 ppm Standard working stock (WC69160B) to 50mL DI. TV = 0.400ppm. For soils, add 1.0g Ottawa sand to 50mL DI and 2.0mL 10ppm Standard working stock (WC69160B). TV = 20.0ppm.

(E) TCN Matrix Spike

Add 0.50mLs 10ppm Standard Working Stock (WC69160B) to 50.0mL sample. TV = 0.100ppm. For Soils, 1.0g sample to 50.0mL DI and 0.50mL 10ppm Standard working stock (WC69160B). TV = 5.0 ppm

(F) TCN 10ppm Reference Working Stock

Add 1.002mL TCN Ref. Stock #2 (WC69154E) Standardization WC71016B → 100mLs w/ 0.25N NaOH (WC69160A) Prep fresh weekly. Store in Amber glass @ 4°C.

CMW 8/2/04

8/2/04 CMW

(A) TCN A

Conc. (mg

0.500
0.400
0.300
0.200
0.100
0.050
0.020
0.010
0.000

(B) CCV

- Add 0.
to 9.7n
10 samp

8/3/04 CB — (C) TDS Re
0.9120g
DI H2O L
bottle a

9/3/04 GN — (D) Post-
Same

8/3/04 CMW — (E) 10%
Same

8/3/04 CMW — (F) Phenc
Same

8/3/04 JJT — (G) Rac'd
-Sa

8/4/04 DK — (H) Total
400.0
DI
g/L

TITLE

PROJECT

Continued from page

7/9/09 (A) 0.02500 N Iodine
TNP in a 1L vol flask dissolve 20.25g KI (WCES2ES) in ~500ml DI. Add 3.2g Iodine (WCES2625) and bring to volume with DI. Stir until dissolved. Store in amber glass at 4°C. Exp 7/9/10. Standardized with each run.

7/10/09 (B) Ascorbic Acid - TPC4
GN — Same as WC92004A. Exp IWK 7/17/09

7/10/09 (C) 1000 ppm TCN Stock #1: Standard Stock
BB To a Tared 500mL volumetric flask, add:
1.26g KCN (WC76005C)
1.00g KOH (WC76005D)
~400mL DI
Dissolve and bring to volume w/DI. Standardize, and store @ 4°C in amber glass. Expires 7/10/10

(D) 1000 ppm TCN Stock #2: Reference Stock
To a tared 500mL volumetric flask, add
1.26g KCN (WC76007B)
1.00g KOH (WC76005D)
~400mL DI
Dissolve and bring to volume w/DI. Standardize, and store @ 4°C in amber glass. Expires 7/10/10

(E) 0.0192 N $AgNO_3$
To a 500mL volumetric flask add ~400mL DI and 1.6324g $AgNO_3$ (WC85285D) which has been dried @ 104°C for 1 hour and stored in a desiccator. Mix to dissolve, then bring to volume w/DI. Use to standardize TCN Stocks. Prepare fresh each use.

7/10/09 (F) TSS Reference
0.2150g Kaolin (WC69285G) brought to 1000g w/ DI.
Store in Plastic bottle @ 4°C.
TV = 215 mg/L Exp: 6/2/10 (10877)

SIGNATURE DATE

Continued to page

DISCLOSED TO AND UNDERSTOOD BY DATE

7/10/09 TCN Stock Standardization

BB (A) Std'n of 1000ppm Stock #1 (WC920370)

Trial #	mLs Stock #1	mLs 0.0192N $AgNO_3$ (WC920372E)	-BLK
BLK	0.0	0.03	-
1	5.0	5.13	5.10
2	5.0	5.11	5.08
3	5.0	5.12	5.09

$\bar{x}$ = 5.09 mLs

$mg/L\ CN^- = \frac{(5.09mL)(0.0192N)(52)(1000)}{5.0\ mL\ Stock\ \#1} = 1016.3712$

Dil'n Factor $1000/1016.3712 = 0.9839\ mL \rightarrow 100\ mL$ for 10 ppm

(B) Std'n of 1000ppm Stock #2 (WC920371D)

Trial #	mLs Stock #2	mLs 0.0192N $AgNO_3$ (WC920371E)	-BLK
BLK	0.0	0.03	-
1	5.0	5.14	5.11
2	5.0	5.14	5.11
3	5.0	5.14	5.11

$\bar{x}$ = 5.11 mLs

$mg/L\ CN^- = \frac{(5.11mL)(0.0192N)(52)(1000)}{5.0\ mL\ Stock\ \#2} = 1020.3648$

Dil'n Factor $1000/1020.3648 = 0.9800\ mL \rightarrow 100\ mL$ for 10 ppm

TITLE PROJECT

Continued from page

8/20/09 EW (A) TDS Reference
0.9153g NaCl (WC85215H) diluted volumetrically to 1 liter w/ DI. Store in plastic bottle @ 4°C
TV = 915 mg/L Exp 8/20/10 (11634)

8/20/09 NM (B) Color Reagent - TKN
- Same as WC9205G. Exp Month, 9/20/09.

(C) NH3 Carrier/Diluent
To a 2 liter plastic bottle add:
- 998g UPDI
- 3.68g conc. instra-analyzed H_2SO_4 (WC9206B)
Prepared solution x4.

8/20/09 As of 8/18/09 for Kjeldahl

(D) ICV/CCV TCN TV = 0.50
0.50 mls 10ppm TCN Ref Stock (WC#5134C) + 9.50 mls 0.25N NaOH (WC#5134H) (9.75 mls from 8/24/09)

(E) ICV/CCV CrO_4 TV = ~~0.45~~ 0.45 (new 8/24/09)
0.25 mls 18.0ppm CrO_4 Ref Stock (WC#5130G) + 9.75 mls UPDI.

(F) ICV/CCV CrO_4 TV = ~~0.45~~ 0.36 (from 8/24/09)
0.25ml 18.0ppm 0.20ml CrO_4 Ref Stock (WC#5130F) + ~~9.75~~ 9.80 mls UPDI.

(G) ICV/CCV NO_2 TV = 0.45
0.25ml 18.0ppm NO_2 Ref Stock (Use all of ~~WC#5135B~~ WC7220 7/24/09) + 9.75mls UPDI

(H) ICV/CCV Cr^{+6} TV = 0.25
0.25mls 10ppm Cr^{+6} Ref Stock (WC#5129G) + 9.75 mls UPDI

(I) ICV/CCV NH_3 TV = 0.10
0.20mls 18ppm NH_3 Stock stock (Use all of WC#5257G) + 9.80 mls diluent (WC#2045D)

8/20/09 N Mead (J) ICV/CCV TKN's (TV=4.00)
9.9mls PDMM + 0.1 mls 400ppm Reference working stock (WC#4200)

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

Analytical Results Summary

Instrument Name: R-Discrete-01 **Analyst:** HLOVEJOY **Analysis Lot:** 168594 **Method/Testcode:** 353.2/NO2

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908090-01	Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 13:24:33	N	IV
RQ0908090-09	Nitrite as Nitrogen	LCS		Water	0.24 mg/L	10 mL	0.245 mg/L	1	0.010	98		9/1/09 13:24:34	N	IV
RQ0908090-10	Nitrite as Nitrogen	DLCS		Water	0.24 mg/L	10 mL	0.243 mg/L	1	0.010	97	1	9/1/09 13:26:59	N	IV
R0904948-006	Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 13:27:00	N	IV
RQ0907955-01	Nitrite as Nitrogen	MB		Soil	0.00 mg/L	25 g	0.10 mg/Kg U	1	0.10			9/1/09 14:14:42	N	IV
RQ0908090-03	Nitrite as Nitrogen	MB		Soil	0.00 mg/L	25 g	0.10 mg/Kg U	1	0.10			9/1/09 14:14:42	N	IV
RQ0908090-11	Nitrite as Nitrogen	LCS		Soil	0.24 mg/L	25 g	2.45 mg/Kg	1	0.10	98		9/1/09 13:24:34	N	IV
RQ0908090-12	Nitrite as Nitrogen	DLCS		Soil	0.24 mg/L	25 g	2.43 mg/Kg	1	0.10	97	1	9/1/09 13:26:59	N	IV
R0904769-014	Nitrite as Nitrogen	N/A		Soil	0.02 mg/L	25 g	0.17 mg/Kg	1	0.11			9/1/09 14:16:41	N	IV
R0904769-015	Nitrite as Nitrogen	N/A		Soil	0.00 mg/L	25 g	0.11 mg/Kg U	1	0.11			9/1/09 14:16:42	N	IV
R0904769-016	Nitrite as Nitrogen	N/A		Soil	0.00 mg/L	25 g	0.11 mg/Kg U	1	0.11			9/1/09 14:16:43	N	IV
R0904769-017	Nitrite as Nitrogen	N/A		Soil	0.00 mg/L	25 g	0.11 mg/Kg U	1	0.11			9/1/09 14:19:43	N	IV
R0904769-022	Nitrite as Nitrogen	N/A		Soil	0.00 mg/L	25 g	0.11 mg/Kg U	1	0.11			9/1/09 14:19:44	Y	IV
RQ0907955-02	Nitrite as Nitrogen	DUP	R0904769-022	Soil	0.00 mg/L	25 g	0.11 mg/Kg U	1	0.11		NC	9/1/09 14:19:45	N	IV
RQ0907955-03	Nitrite as Nitrogen	MS	R0904769-022	Soil	0.23 mg/L	25 g	2.52 mg/Kg	1	0.11	93		9/1/09 14:52:58	N	IV
R0904769-023	Nitrite as Nitrogen	N/A		Soil	0.00 mg/L	25 g	0.11 mg/Kg U	1	0.11			9/1/09 14:52:59	N	IV
R0904769-024	Nitrite as Nitrogen	N/A		Soil	0.00 mg/L	25 g	0.13 mg/Kg U	1	0.13			9/1/09 14:53:00	N	IV
R0904769-025	Nitrite as Nitrogen	N/A		Soil	0.01 mg/L	25 g	0.14 mg/Kg U	1	0.14			9/1/09 14:55:11	N	IV
R0904797-002	Nitrite as Nitrogen	N/A		Soil	0.39 mg/L	25 g	4.31 mg/Kg	1	0.11			9/1/09 14:55:12	N	IV
RQ0908042-01	Nitrite as Nitrogen, SPLP	MB		Soil	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 15:15:58	N	IV
RQ0908090-13	Nitrite as Nitrogen, SPLP	LCS		Soil	0.24 mg/L	10 mL	0.240 mg/L	1	0.010	96		9/1/09 15:13:32	N	IV
RQ0908090-14	Nitrite as Nitrogen, SPLP	DLCS		Soil	0.24 mg/L	10 mL	0.244 mg/L	1	0.010	98	2	9/1/09 15:15:57	N	IV
R0904817-001	Nitrite as Nitrogen, SPLP	N/A		Soil	0.92 mg/L	10 mL	4.60 mg/L	5	0.050			9/1/09 15:15:59	N	IV
RQ0908043-01	Nitrite as Nitrogen, SPLP	MB		Soil	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			9/1/09 15:18:25	N	IV
R0904817-002	Nitrite as Nitrogen, SPLP	N/A		Soil	0.88 mg/L	10 mL	4.41 mg/L	5	0.050			9/1/09 15:18:26	N	IV
R0904797-001	Nitrite as Nitrogen	N/A		Soil	0.72 mg/L	25 g	77.1 mg/Kg	10	1.1			9/1/09 15:38:56	N	IV

R0904948
R0904769
R0904797
R0904817
HLovejoy

Reviewed & Approved
By: CK 9/3/09
Date:

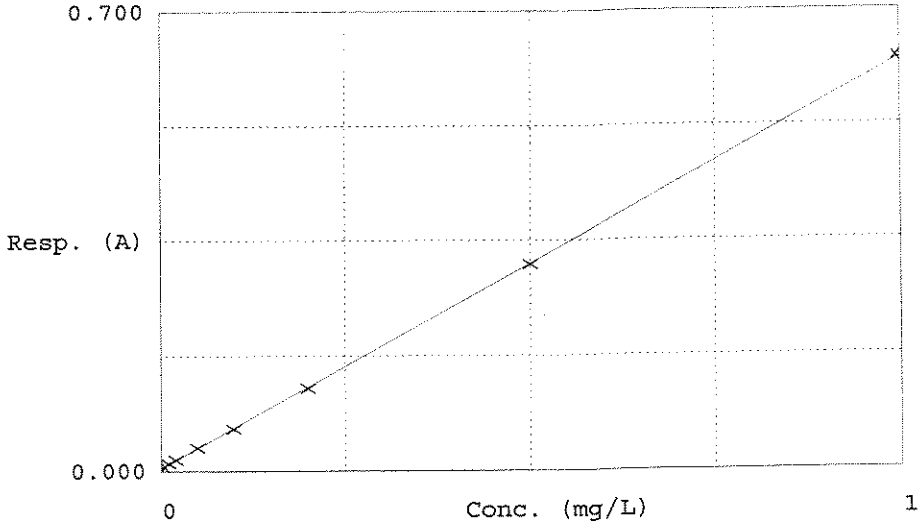
Columbia Analytical Services
Rochester, NY 14607
Analyst: Hewegey
Pipette: 01 Bibe

9/1/2009 12:53

Test NO2 353.2

Accepted	9/1/2009	12:53
Factor	1.61046	
Bias	0.00409	
Coeff. of det.	0.999935	

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	NO2- 0.0	0.00587	0.00288	0.00000	
2	NO2- 0.01	0.01189	0.01257	0.01000	
3	NO2- 0.02	0.01741	0.02145	0.02000	
4	NO2- 0.05	0.03552	0.05062	0.05000	
5	NO2- 0.10	0.06415	0.09672	0.10000	
6	NO2- 0.20	0.12580	0.19601	0.20000	
7	NO2- 0.5	0.31298	0.49745	0.50000	
8	NO2- 1.00	0.62647	1.00232	1.00000	
9	1 ICV-NO2(contr	0.28191	0.44742	0.45000	
10	2 ICB-NO2(contr	0.00571	0.00262	0.00000	

Result Report AquaKem 7.0 Page: 1

Columbia Analytical Services
Rochester, NY 14607
Analyst: Hoveys
Pipette: o.Bive

Date : 9/1/2009
Time : 18:10

Test NO2 353.2
Unit mg/L

Sample ID:	Resp.	Result	Man.dilut	Dilut	Date and Time	
1 ICV-NO2	0.282	0.4474			9/1/2009	12:00
2 ICB-NO2	0.006	0.0026			9/1/2009	12:02
3 CCV-NO2	0.283	0.4493			9/1/2009	13:24
4 CCB-NO2	0.006	0.0035			9/1/2009	13:24
LCS NO2 1	0.156	0.2445			9/1/2009	13:24
LCS NO2 2	0.155	0.2427			9/1/2009	13:26
R0904948-006	0.006	0.0028			9/1/2009	13:27
8042-01 MB	0.006	0.0023			9/1/2009	13:27
R0904817-001	2.894	4.6542	overrange		9/1/2009	13:29
8043-01 MB	0.006	0.0033			9/1/2009	13:29
R0904817-002	2.778	4.4671	overrange		9/1/2009	13:29
3 CCV-NO2	0.288	0.4572			9/1/2009	13:31
4 CCB-NO2	0.006	0.0028			9/1/2009	13:31
3 CCV-NO2	0.282	0.4480			9/1/2009	14:01
4 CCB-NO2	0.016	0.0200			9/1/2009	14:02
7955-01 MB	0.007	0.0048			9/1/2009	14:02
R0904769-014	0.006	0.0027			9/1/2009	14:04
R0904769-015	0.006	0.0030	CCB failed high. All repeated		9/1/2009	14:04
R0904769-016	0.005	0.0016			9/1/2009	14:04
R0904769-017	0.006	0.0031			9/1/2009	14:06
R0904769-022	0.011	0.0112			9/1/2009	14:06
4769-022 DUP	0.005	0.0017			9/1/2009	14:06
3 CCV-NO2	0.285	0.4517			9/1/2009	14:09
4 CCB-NO2	0.006	0.0032			9/1/2009	14:09
7955-01 MB	0.006	0.0027			9/1/2009	14:14
R0904769-014	0.013	0.0150			9/1/2009	14:16
R0904769-015	0.006	0.0038			9/1/2009	14:16
R0904769-016	0.004	-0.0002			9/1/2009	14:16
R0904769-017	0.006	0.0029			9/1/2009	14:19
R0904769-022	0.005	0.0012			9/1/2009	14:19
4769-022 DUP	0.006	0.0028			9/1/2009	14:19
3 CCV-NO2	0.282	0.4480			9/1/2009	14:21
4 CCB-NO2	0.006	0.0028			9/1/2009	14:22
4769-022 SPK	0.151	0.2368			9/1/2009	14:34
R0904769-023	0.005	0.0020			9/1/2009	14:34
R0904769-024	0.006	0.0024			9/1/2009	14:34
R0904769-025	0.006	0.0031			9/1/2009	14:36
R0904797-001	3.497	5.6249	CCV failed low. All repeated		9/1/2009	14:36
R0904797-002	0.253	0.4005			9/1/2009	14:36
3 CCV-NO2	0.230	0.3632			9/1/2009	14:38
4 CCB-NO2	0.006	0.0035			9/1/2009	14:38
LCS NO2 3	0.157	0.2463			9/1/2009	14:41
LCS NO2 4	0.156	0.2452			9/1/2009	14:41
MB 8042-01	0.006	0.0031			9/1/2009	14:41
4817-001 1/5	0.568	0.9084			9/1/2009	14:44
4817-001 1/10	0.285	0.4524			9/1/2009	14:44
MB 8043-01	0.006	0.0037			9/1/2009	14:44
4817-002 1/5	0.541	0.8654			9/1/2009	14:47
4817-002 1/10	0.275	0.4356			9/1/2009	14:47
3 CCV-NO2	0.265	0.4200			9/1/2009	14:49

Columbia Analytical Services
Rochester, NY 14607
Analyst: H. Lovejoy
Pipette: 01 Blue

Date : 9/1/2009
Time : 18:10

Test NO2 353.2
Unit mg/L

Sample ID:	Resp.	Result	Man.dilut	Dilut	Date and Time
4 CCB-NO2	0.006	0.0029			9/1/2009 14:49
4769-022 SPK	0.149	0.2333			9/1/2009 14:52
R0904769-023	0.006	0.0026			9/1/2009 14:52
R0904769-024	0.006	0.0034			9/1/2009 14:53
R0904769-025	0.007	0.0053			9/1/2009 14:55
R0904797-002	0.249	0.3949			9/1/2009 14:55
3 CCV-NO2	0.275	0.4367			9/1/2009 14:57
4 CCB-NO2	0.006	0.0029			9/1/2009 14:57
3 CCV-NO2	0.276	0.4376			9/1/2009 15:13
4 CCB-NO2	0.006	0.0032			9/1/2009 15:13
LCS NO2 3	0.153	0.2396			9/1/2009 15:13
LCS NO2 4	0.156	0.2441			9/1/2009 15:15
MB 8042-01	0.006	0.0035			9/1/2009 15:15
4817-001 1/5	0.575	0.9202	x5= 4.601		9/1/2009 15:15
4817-001 1/10	0.284	0.4508	x10=4.508		9/1/2009 15:18
MB 8043-01	0.006	0.0037			9/1/2009 15:18
4817-002 1/5	0.551	0.8811	x5= 4.4055		9/1/2009 15:18
4817-002 1/10	0.280	0.4442	x10= 4.442		9/1/2009 15:19
3 CCV-NO2	0.279	0.4428			9/1/2009 15:21
4 CCB-NO2	0.006	0.0029			9/1/2009 15:21
3 CCV-NO2	0.280	0.4439			9/1/2009 15:37
4 CCB-NO2	0.006	0.0029			9/1/2009 15:37
4797-001 1/5	0.908	1.4552	overrange x 5=7.276		9/1/2009 15:37
4797-001 1/10	0.449	0.7165	x10 = 7.165		9/1/2009 15:38
3 CCV-NO2	0.280	0.4439			9/1/2009 15:40
4 CCB-NO2	0.006	0.0030			9/1/2009 15:40

Columbia Analytical Services
1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: _____ Date: 9/1/09

Analysis: Nitrite Instrument: Aquakem

Quality Control:

	Same as Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC65144E, 3/5/03	WC72002F, 1/26/09				
b) ICV Preparation:	WC92067G, 8/20/09	WC72007G, 1/26/09	0.25	18	10	0.45
c) LCS Preparation:	WC65144G, 3/5/03	WC72002F, 1/26/09	0.25	10	10	0.25
d) Matrix Spike Prep.:	WC65144G, 3/5/03	WC72002F, 1/26/09	0.25	10	10	0.25

Instrument log filled in? (Y) (N)

Packages: Copy and attach Standards Preparation

Comments:

Production:

	Start Time	End Time	Total (minutes)
Preparation Time :			
Analytical Time:			
Finish Time:			

# of Samples (including Mtx QC): _____
Repeats due to Sample: _____
Repeats due to Error: _____

p:\greg\forms\cover.no2

REFERENCE (ICV / CCV) STOCK PREP

(Fluoride and Bromide are purchased 1000ppm standards)

Reviewed & Approved
By: CK SD / CK SB
Date: 10/6/06 5/16/07 / 9/10/07 11/5/08

SD 6/12/08

Chloride 650ppm Stock: 1.070g NaCl crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ room temp. for 1 year.

ID Letter	NaCl Source	Analyst	Date Prepared	Date Expires	Final Cl Reference Stock ID
A					
B					
C					
D					
E					

Nitrite 180ppm Stock: 1.09g KNO2 previously dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KNO2 Source	Analyst	Date Prepared	Date Expires	Final NO2 Reference Stock ID
F	WC760970	NM	1/31/08	1/31/09	WC72007F (3902)
G	WC850960	[illegible]	1/26/09	1/26/10	WC72007G (7740)
H					
I					
J					

Nitrate 180ppm Stock: 1.30g KNO3 crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Transfer to amber jar and add 1.0ml Chloroform. Store in amber jar @ room temp. for 6 months.

CK 10/5/06

ID Letter	~~KNO2~~ KNO3 Source	Chloroform Source ID	Analyst	Date Prepared	Date Expires	Final NO3 Reference Stock ID
K	WC76115G	WC76170J	FN	10/5/06	4/5/07	WC72007K
L	WC76115G1	WC76234A	FN	3/26/07	9/26/07	WC72007L
M	WC76115G	WC76234A	NM	9/21/07	3/21/08	WC72007M
N	WC76115G	WC76234A	CMW	3/25/08	9/25/08	WC72007N
O						

OPO4 180ppm Stock: 0.7909g granular KH2PO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KH2PO4 Source	Analyst	Date Prepared	Date Expires	Final OPO4/TPO4 Reference Stock ID
P	WC 65 196E	TC	2/23/07	11/3/07	WC72007P
Q	WC850549	AB	11/30/07	11/30/08	WC72007Q
R	WC850856	RP	2/14/08	2/14/09	WC72007R
S	WC850549	[illegible]	1/26/09	1/26/10	WC72007S (7738)
T					

Sulfate 3200ppm Stock: 5.80g K2SO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	K2SO4 Source	Analyst	Date Prepared	Date Expires	Final SO4 Reference Stock ID
U					
V					
W					
X					
Y					

Reviewed & Approved
By: CK SD / CK SD 1/17/08
Date: 10/16/06 5/1/07 / 9/10/07

STANDARD STOCK PREP

(Fluoride and Bromide are purchased 1000ppm standards)

Chloride 1000ppm Stock: 1.648g NaCl crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ room temp. for 1 year.

ID Letter	NaCl Source	Analyst	Date Prepared	Date Expires	Final Cl 1000ppm Stock ID
A	WC762596	CMC	1/26/09	1/26/10	~~WC72002A~~ CMC 1/26/09
B					
C					
D					
E					

Nitrite 1000ppm Stock: 6.07g KNO2 previously dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KNO2 Source	Analyst	Date Prepared	Date Expires	Final NO2 1000ppm Stock ID
F	WC760970	CMC	1/26/09	1/26/10	WC72002F (7741)
G					
H					
I					
J					

Nitrate 1000ppm Stock: 7.22g KNO3 crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Transfer to amber jar and add 1.0ml Chloroform. Store in amber jar @ room temp. for 6 months.

CK 10/5/06

ID Letter	~~KNO2~~ Source KNO3	Chloroform Source ID	Analyst	Date Prepared	Date Expires	Final NO3 1000ppm Stock ID
K	WC761140	WC76170J	FN	10/5/06	4/5/07	WC72002K
L	WC761140	WC76234A	FN	3/26/07	9/26/07	WC72002L
M	WC761140	WC76234A	NM	9/21/07	3/21/08	WC72002M
N	WC761140	WC76234A	CMC	3/25/08	9/25/08	WC72002N
O						

OPO4 / TPO4 1000ppm Stock: 4.394g KH2PO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KH2PO4 Source	Analyst	Date Prepared	Date Expires	Final OPO4/TPO4 1000ppm Stock ID
P	WC650855	CMC	1/26/09	1/26/10	WC72002P (7742)
Q					
R					
S					
T					

Sulfate 1000ppm Stock: 1.479g Na2SO4 dried overnight at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	Na2SO4 Source	Analyst	Date Prepared	Date Expires	Final SO4 1000ppm Stock ID
U					
V					
W					
X					
Y					

3/5/03 NM (A) 4-AAP - Phenols
- same as WC65126H. Prepare fresh each run.

3/5/03 DMG (B) NH_4OH Buffer (TOTN + NO_2)
To a tared 1L amber jar add:
- 778.5 g DI
- 113.4 g HCl (WC65093I, EIN Lot # 42167)
- 76.5 g NH_4Cl (WC55209B, EIN Lot # K28141705, 033)
- 0.90 g EDTA (WC65079D, EIN Lot # 42081224)

Stir until dissolved. Cool. Adjust pH to 8.5 w/ conc. HCl or NaOH. Store @ RT. Exp. 1 year, 3/5/04.

(C) Sulfanilamide Color Reagent (TOTN) + (NO_2)
To a tared 1L amber jar add:
- 758 g DI
- 153 g H_3PO_4 (WC65027F, EIN Lot # 40341226)
- 0.90 g NED (WC55231B, Baker Lot # TC3600)
- 36 g Sulfanilamide (WC64970, Baker Lot # V09H38)

Stir until dissolved. Store @ RT. Exp. 1 month, 4/5/03

3/5/03 DMG Nitrite (NO_2) (Lachat: PQL = 0.010 mg/L):
(D) 10 ppm Working Stock: do (2) two 1/10 serial dilutions of 1000 ppm STD Stock (WC65135A)

(E) Standards

STD.	CONC (mg/L)	mls 10 ppm (WC65144D)	mls DI
A	1.000	1.00	9.00
B	0.5000	0.50	9.50
C	0.200	0.20	9.80
D	0.100	1/10 dil'n of STD A.) 1.000	
E	0.050	1/10 dil'n of STD B.) 0.500	
F	0.020	1/10 dil'n of STD C.) 0.200	
G	0.010	1/10 dil'n of STD D.) 0.100	
H	0.000	10 mls DI	

Reviewed & Approved By: Date:

(F) ICV/CCV (TV = 0.900 mg/L)
Add 0.50 mls 18.0 ppm Reference Stock ((1) one 1/10 dilution of 180 ppm Reference Stock (WC65135B)) to 9.5 mls DI.

(G) LCS/Matrix Spike: (TV = 0.250 mg/L)
Add 0.25 mls 10 ppm working stock (WC65144D) to 10 mls DI or Sample.

3/5/03 DMG (A) Nitrat
(A) 10 ppm
dilutions
make fr
(B) Standa
Std C
H 2
B 1.
C 0.
D 0.2
E 0.1
F 0.0
G 0.0
H 0.01
I 0.00
(C) Refere
make f
NO_3 Ref
(D) LCS/M
Add 0.0
dilution
to 10 m
(E) Colum
1.00 ppm
1.00 ppm

TITLE PROJECT

Continued from page

8/20/09 EW (A) TDS Reference
0.9153g NaCl (WC8521SH) diluted volumetrically to 1 liter w/ DI. Store in plastic bottle @ 4°C
TV = 915 mg/L Exp 8/20/10 (11634)

8/20/09 NM (B) Color Reagent - TKN
- same as WC92059G. Exp. 1 month, 9/20/09.

(C) NH3 Carrier/Diluent
To a 2 liter plastic bottle add:
- 998g UPDI
- 3.68g conc. insta-analyzed H_2SO_4 (WC9-2064B)
Prepared solution x4.

8/20/09 As of 8/15/09 for kinetics.

(D) ICV/CCV TCN TV = 0.50
0.50 mls 10ppm TCN Ref Stock (WC#5134C) + ~~9.35~~ 9.50 mls 0.25N NaOH (WC#5134H)

(E) ICV/CCV OPO_4-P TV = ~~0.45~~ 0.45
0.25 mls 1.80ppm OPO_4 Ref Stock (WC#5136G) + 9.75 mls UPDI

(F) ICV/CCV OPO_4 TV = ~~0.43~~ 0.36
0.25ml 18.0ppm OPO_4 Ref Stock (WC#5136F) + ~~9.75~~ 9.64 mls UPDI.
0.20ml

(G) ICV/CCV NO_2 TV = 0.45
0.25ml 18.0ppm NO_2 Ref Stock (1/10 dil of ~~WC#5135B~~ WC720C TG) + 9.75mls UPDI

(H) ICV/CCV Cr^{+6} TV = 0.25
0.25mls 10ppm Cr^{+6} Ref STOCK (WC#5125G) + 9.75 mls UPDI

(I) ICV/CCV NH_3 TV = 0.10
0.20mls 18ppm NH_3 Reference stock (1/10 dil of WC#5257G) + 9.50 mls diluent (WC#1204SD)

8/20/09 NMead (J) ICV/CCV TKN's (TV=4.00)
9.9mls PDMM + 0.1 mls 400ppm Reference working stock (WC#420C)

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE PROPRIETARY INFORMATION

Analytical Results Summary

Instrument Name: R-pH-Metal-01 **Analyst:** DBOND **Analysis Lot:** 168679 **Method/Testcode:** 9040B Modified/pH SPLP

ab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
0904817-001	pH, SPLP	N/A		Soil	9.88 pH Units		9.88 pH Units ✓	1	0.00			9/1/09 12:30:00	N	IV
Q0908042-01	pH, SPLP	MB		Soil	4.98 pH Units		4.98 pH Units ✓	1	0.00			9/1/09 12:30:00	N	IV

R4817 1 copy

Reviewed & Approved
By: DK
Date: 9/3/09

Preparation Information Benchsheet

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Limit 9503

NON-VOA SPLP EXTRACTION – METHOD 1312

Date: 8/31/09 **Analyst:** DCA

Order #	001	→	→	→
Submission #	R0904817	→	→	→
Analysis	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables
Other Analytes				
Sample Description	brown medium	brown medium	brown medium	brown medium
Extraction Vessel (# or Letter)	93	G	K	TL
Rotator #				
Percent Solid Determination	Yes ~~Not Applicable~~	Yes ~~Not Applicable~~	Yes ~~Not Applicable~~	Yes ~~Not Applicable~~
wgt of total sample:	100.0	100.0	100.0	100.0
wgt of liquid:	—	—	—	—
wgt of solid:	100.0	100.0	100.0	100.0
% Solids:	100%	100%	100%	100%
Wgt of sample extracted:	100.0	100.0	100.0	100.0
amount of Ext. Fluid: (20x%Solidsxwgt of total sample/100)	2000	2000	2000	2000
Extraction Procedure				
Particle size reduction (Will sample pass through 9.5mm sieve?)	(YES) NO	(YES) NO	(YES) NO	(YES) NO
Extraction Fluid #1: Samples from east of Mississippi River 'pH = 4.2 +/- 0.05'	—	—	—	—
Extraction Fluid #2: Samples from west of Mississippi River 'pH = 5.0 +/- 0.05'	5.02	4.99	4.97	4.98
Extraction Fluid #3: ASTM Type II Water	—	—	—	—
Record of Extraction				
Extraction start Time	1305	→	→	→
Extraction stop Time	705	→	→	→
Minimum Temp (23°C +/-2°)	22	→	→	→
Maximum Temp (23°C +/-2°)	24	→	→	→
pH of Filtrate	9.88	9.88	9.88	9.88
Are initial and final extracts compatible (If applicable)	YES NO	YES NO	YES NO	YES NO
Time of filtration				

H_2SO_4 Lot # M1780089K HNO_3 Lot # M1780094F

Lims #95033

NON-VOA SPLP EXTRACTION – METHOD 1312

Date: 8/31/09 **Analyst:** DCB

Order #	RQ0808042-01 method blank →	→	→	→
Submission #				
Analysis	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables
Other Analytes				
Sample Description	colorless clear	colorless clear	colorless clear	colorless clear
Extraction Vessel (# or Letter)	90	P	B	D
Rotator #	4	4		
Percent Solid Determination	Yes ~~Not Applicable~~	Yes ~~Not Applicable~~	Yes ~~Not Applicable~~	Yes ~~Not Applicable~~
wgt of total sample:	—	—	—	—
wgt of liquid:	—	—	—	—
wgt of solid:	—	—	—	—
% Solids:	—	—	—	—
Wgt of sample extracted:	—	—	—	—
amount of Ext. Fluid: (20x%Solidsxwgt of total sample/100)	2000	2000	2000	2000
Extraction Procedure				
Particle size reduction (Will sample pass through 9.5mm sieve?)	(YES) NO	(YES) NO	(YES) NO	(YES) NO
Extraction Fluid #1: Samples from east of Mississippi River 'pH = 4.2 +/- 0.05'	—	—	—	—
Extraction Fluid #2: Samples from west of Mississippi River 'pH = 5.0 +/- 0.05'	4.98	5.00	5.01	4.98
Extraction Fluid #3: ASTM Type II Water	—	—	—	—
Record of Extraction				
Extraction start Time	1305 →	→	→	→
Extraction stop Time	705 →	→	→	→
Minimum Temp (23°C +/-2°)	22 →	→	→	→
Maximum Temp (23°C +/-2°)	24 →	→	→	→
pH of Filtrate	4.98	4.94	5.01	4.99
Are initial and final extracts compatible (If applicable)	YES NO	YES NO	YES NO	YES NO
Time of filtration				

H_2SO_4 Lot # m1280089K **HNO_3 Lot #** m1280044F

Analytical Results Summary

Instrument Name: R-pH-Metal-01 **Analyst:** DBOND **Analysis Lot:** 168680 **Method/Testcode:** 9040B Modified/pH SPLP

ab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
0904817-002	pH, SPLP	N/A		Soil	9.93 pH Units		9.93 pH Units	1	0.00			9/1/09 12:30:00	N	IV
Q0908043-01	pH, SPLP	MB		Soil	6.82 pH Units		6.82 pH Units	1	0.00			9/1/09 12:30:00	N	IV

RU817 1 copy

Reviewed & Approved
By: GH
Date: 9/3/09

Preparation Information Benchsheet

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matt Cary Date: 9/1/09 1305

Extracts Examined
Yes No

WMS # 95034

NON-VOA SPLP EXTRACTION – METHOD 1312

Date: 8/31/09 **Analyst:** DCS

Order #	002			
Submission #	R0904817			
Analysis	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables
Other Analytes				
Sample Description	brown medium	brown medium	brown medium	brown medium
Extraction Vessel (# or Letter)	92	94	E5	242
Rotator #				
Percent Solid Determination	Yes Not Applicable	Yes Not Applicable	Yes Not Applicable	Yes Not Applicable
wgt of total sample:	100.0	100.0	100.0	100.0
wgt of liquid:	—	—	—	—
wgt of solid:	100.0	100.0	100.0	100.0
% Solids:	100%	100%	100%	100%
Wgt of sample extracted:	100.0	100.0	100.0	100.0
amount of Ext. Fluid: (20x%Solidsxwgt of total sample/100)	2000	2000	2000	2000
Extraction Procedure				
Particle size reduction (Will sample pass through 9.5mm sieve?)	YES NO	YES NO	YES NO	YES NO
Extraction Fluid #1: Samples from east of Mississippi River 'pH = 4.2 +/- 0.05'	—	—	—	—
Extraction Fluid #2: Samples from west of Mississippi River 'pH = 5.0 +/- 0.05'	—	—	—	—
Extraction Fluid #3: ASTM Type II Water	6.81	6.81	6.81	6.81
Record of Extraction				
Extraction start Time	1205			
Extraction stop Time	705			
Minimum Temp (23°C +/-2°)	22			
Maximum Temp (23°C +/-2°)	24			
pH of Filtrate	9.93	9.93	9.93	9.93
Are initial and final extracts compatible (If applicable)	YES NO	YES NO	YES NO	YES NO
Time of filtration				

H_2SO_4 Lot # — HNO_3 Lot # —

NON-VOA SPLP EXTRACTION – METHOD 1312

Date: 8/31/09 **Analyst:** JCA

		RQ0908043-01		
Order #	method blank	→	→	→
Submission #				
Analysis	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables	Metals / Hg Extractables
Other Analytes				
Sample Description	colorless clear	colorless clear	colorless clear	colorless clear
Extraction Vessel (# or Letter)	91	J	I	X
Rotator #	4	4		
Percent Solid Determination	Yes Not Applicable	Yes Not Applicable	Yes Not Applicable	Yes Not Applicable
wgt of total sample:	—	—	—	—
wgt of liquid:	—	—	—	—
wgt of solid:	—	—	—	—
% Solids:	—	—	—	—
Wgt of sample extracted:	—	—	—	—
amount of Ext. Fluid: (20x%Solidsxwgt of total sample/100)	2000	2000	2000	2000
Extraction Procedure				
Particle size reduction (Will sample pass through 9.5mm sieve?)	(YES) NO	(YES) NO	(YES) NO	(YES) NO
Extraction Fluid #1: Samples from east of Mississippi River 'pH = 4.2 +/- 0.05'	—	—	—	—
Extraction Fluid #2: Samples from west of Mississippi River 'pH = 5.0 +/- 0.05'	—	—	—	—
Extraction Fluid #3: ASTM Type II Water	6.81	6.81	6.81	6.81
Record of Extraction				
Extraction start Time	1305	→	→	→
Extraction stop Time	705	→	→	→
Minimum Temp (23°C +/-2°)	22	→	→	→
Maximum Temp (23°C +/-2°)	24	→	→	→
pH of Filtrate	6.83	6.82	6.82	6.81
Are initial and final extracts compatible (If applicable)	YES NO	YES NO	YES NO	YES NO
Time of filtration				

H_2SO_4 Lot # — HNO_3 Lot # —

Analytical Results Summary

Instrument Name: R-FIA-01 **Analyst:** NMEAD **Analysis Lot:** 169545 **Method/Testcode:** 365.1 Modified/Tot Phos SPLP

ab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
:Q0908042-01	Phosphorus	MB		Soil	0.01 mg/L	25.000 mL	0.012 mg/L J	1	0.050			9/9/09 10:40:02	N	IV
:Q0908368-01	Phosphorus	LCS		Soil	0.80 mg/L	25.00 mL	0.797 mg/L	1	0.050	100		9/9/09 10:31:34	N	IV
:Q0908368-02	Phosphorus	MB		Soil	0.01 mg/L	25.00 mL	0.012 mg/L J	1	0.050			9/9/09 10:40:02	N	IV
:0904817-001	Phosphorus	N/A		Soil	0.08 mg/L	25.000 mL	0.078 mg/L B	1	0.050			9/9/09 10:40:46	N	IV
:Q0908043-01	Phosphorus	MB		Soil	0.01 mg/L	25.000 mL	0.011 mg/L J	1	0.050			9/9/09 10:41:30	N	IV
:0904817-002	Phosphorus	N/A		Soil	0.05 mg/L	25.000 mL	0.046 mg/L BJ	1	0.050			9/9/09 10:42:13	N	IV

R4817
R4769
R4797
R4843
4 copies

Reviewed & Approved
By: CK
Date: 9/10/09

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: DB Date: 9/1/09

Received By: Martha Cary Date: 9/1/09 1305

Extracts Examined
Yes No

Regular Level
SPLP

Preparation Information Benchsheet

Run #169545

Prep Run#: 95485
Team: GenChem/SROBINSON

Prep WorkFlow: Gen Dig LP
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/8/09 04:25 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB	.07	25.000mL	365.1 Modified/Tot Phos SPLP				25.00mL			
2	R0904817-001	SA64-10BSPLP2	.12	25.000mL	365.1 Modified/Tot Phos SPLP				25.00mL			
3	RQ0908043-01	MB	.07	25.000mL	365.1 Modified/Tot Phos SPLP				25.00mL			
4	R0904817-002	SA64-10BSPLP3	.15	25.000mL	365.1 Modified/Tot Phos SPLP				25.00mL			

Preparation Materials

Water Deionized H2O	Millipore System (2263)	Sulfuric Acid, 5.6M	WC92077E (12064)	Ammonium Persulfate RG (NH4)2S2O8	WC92065D (11815)

Preparation Steps

Step: Digestion
Started: 9/8/09 16:25
Finished: 9/8/09 17:30
By: SROBINSON

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Columbia Analytical Services
1 Mustard Street
Rochester, NY 14609

Analyte: TPO4 Digest Low Level / Regular Level
Analyst: SRR Date: 9/8/07
Pipet ID: Aquaman, Lucy Spk Witness: RP

#	Misc.	Order #	Sample Amt	Dilution	Spk Amount	Comments
1		PB RL WATER	25	1		
2		LCS INORG RL	25	1	0.20 mL	100 ppm
3		LCS ORG RL	25	1	0.20 mL	100 ppm
4	MB SPLP	RQ0908042-01	25	1		
5		R0904817-001	25	1		
6	MB SPLP	RQ0908043-01	25	1		
7		R0904817-002	25	1		
8	(4)	R0904818-001	25	1		
9		R0904769-001	25	1		
10		4769-001 DUP	25	1		
11		4769-001 SPK	25	1	0.20 mL	100 ppm
12		R0904792-001	25	1		
13		R0904792-002	25	1		
14		R0904792-003	25	1		
15		R0904792-004	25	1		
16		R0904792-005	25	1		
17		R0904792-006	25	1		
18		R0904880-002	25	1		
19		R0904886-005	25	1		
20		4886-005 DUP	25	1		
21		4886-005 SPK	25	1	0.20 mL	100 ppm
22		R0904905-001	25	1		
23	(4)	R0904942-002	25	1		
24		PB 1 SOIL	0.25 → 25			
25		LCS 1 INORG SOIL	0.25		0.20 mL	100 ppm
26		LCS 1 ORG SOIL	0.25		0.20 mL	100 ppm
27	(10)	R0904769-017	0.28			
28		R0904769-022	0.27			
29		4769-022 DUP	0.26			
30		4769-022 SPK	0.26		0.20 mL	100 ppm
31		R0904769-023	0.25			
32		R0904769-024	0.29			
33		R0904769-025	0.26			
34		R0904797-001	0.28			
35		R0904797-002	0.26			
36		R0904797-003	0.27			
37		R0904797-004	0.29			
38		R0904797-005	0.29			
39		R0904797-006	0.26			
40		R0904797-007	0.28			
41		R0904797-008	0.27			
42		R0904797-009	0.25			
43		R0904797-010	0.25			
44		R0904797-011	0.26			
45		R0904797-012	0.28			
46		R0904797-015	0.27			
47		4797-015 DUP	0.28			
48		4797-015 SPK	0.27		0.20 mL	100 ppm
49		R0904797-016	0.27			
50		R0904797-017	0.29 ↓			

R = 16.4
R = 31.78

Columbia Analytical Services
1 Mustard Street
Rochester, NY 14609

Analyte: TPO4 Digest Low Level / Regular Level
Analyst: SBR Date: 9/8/09
Pipet ID: Aquaman, Lucy Spk Witness:

#	Misc.	Order #	Sample Amt	Dilution	Spk Amount	Comments
1		PB 2 SOIL	0.25 → 25		0.200	
(2)		LCS 2 INORG SOIL	0.25		~~0.020 mL~~	100 ppm
(3)		LCS 2 ORG SOIL	0.25		nm 9/9/09 ~~0.020 mL~~	100 ppm
4	10	R0904797-018	0.27		0.200	
5		R0904797-019	0.30			
6		R0904797-022	0.27			
7		4797-022 DUP	0.28		0.200	
(8)		4797-022 SPK	0.27		~~0.020 mL~~ nm 9/9/09	100 ppm
9		R0904797-023	0.26			
10		R0904797-024	0.28			
11		R0904797-025	0.30			
12		R0904843-001	0.29			
13		R0904843-002	0.26			
14		R0904843-003	0.30			
15		R0904843-004	0.28			
16		R0904843-005	0.29			
17		R0904843-006	0.27			
18		R0904843-007	0.25			
19		R0904843-008	0.27			
20		R0904843-009	0.29			
21		R0904843-010	0.29			
22		4843-010 DUP	0.26		0.200	
(23)		4843-010 SPK	0.28		~~0.020 mL~~ nm 9/9/09	100 ppm
24		R0904843-011	0.27			
25		R0904843-012	0.30			
26		R0904843-013	0.28			
27		R0904843-014	0.27			
~~28~~						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40			SBR 9/8/09			
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						

Creator: NMEAD
Creation Date: Sep 9, 2009 9:08:33
Last Modified: Sep 9, 2009 9:08:33
Description: QC 8000 365.1 TPO4 - RUN LOG - TPO4B 0909090A

Cup #	Sample ID	Manual Dilution	Sample Type	
1	Standard A - 2.00	1.0000	CalStd	
2	Standard B - 1.00	1.0000	CalStd	
3	Standard C - 0.50	1.0000	CalStd	
4	Standard D - 0.20	1.0000	CalStd	
5	Standard E - 0.10	1.0000	CalStd	
6	Standard F - 0.05	1.0000	CalStd	
7	Standard G - 0.02	1.0000	CalStd	
8	Standard H - 0.00	1.0000	CalStd	
1	ICV TV = 0.8	1.0000	Unknown	
2	ICB	1.0000	Unknown	
3	PB-RL	1.0000	Unknown	
4	LCS-RL INORG. TV = 0.8	1.0000	Unknown	
5	LCS-RL ORG. TV = 0.8	1.0000	Unknown	
6	PB-1 SOIL	1.0000	Unknown	
7	LCS-1 SOIL INORG TV = 80	1.0000	Unknown	
8	LCS-1 SOIL ORG TV = 80	1.0000	Unknown	
9	PB-2 SOIL	1.0000	Unknown	
10	LCS-2 SOIL INORG	1.0000	Unknown	
11	LCS-2 SOIL ORG	1.0000	Unknown	
12	CCV	1.0000	Unknown	
13	CCB	1.0000	Unknown	
14	CRDL - 0.100	1.0000	Unknown	
15	CRDL - 0.050	1.0000	Unknown	
16	RQ0908042-01 MB	1.0000	Unknown	
17	R0904817-001	1.0000	Unknown	
18	RQ0908043-01 MB	1.0000	Unknown	
19	R0904817-002	1.0000	Unknown	
20	R0904818-001	4.0000	Unknown	
21	R0904769-001	1.0000	Unknown	
22	4769-001 DUP	1.0000	Unknown	
23	4769-001 SPK TV = 0.8	1.0000	Unknown	
24	CCV	1.0000	Unknown	
25	CCB	1.0000	Unknown	
26	R0904792-001	1.0000	Unknown	- rpt C# 98 - 1/4
27	R0904792-002	1.0000	Unknown	- rpt C# 99 - 1/4
28	R0904792-003	1.0000	Unknown	- rpt C# 100 - 1/4
29	R0904792-004	1.0000	Unknown	- rpt C# 101 - 1/4
30	R0904792-005	1.0000	Unknown	- rpt C# 102 - 1/4
31	R0904792-006	1.0000	Unknown	- rpt C# 103 - 1/4
32	R0904880-002	1.0000	Unknown	- rpt C# 104 - 1/4

Cup #	Sample ID	Manual Dilution	Sample Type	
33	R0904886-005	1.0000	Unknown	} rpt c# 105 → 107 - 1/
34	4886-005 DUP	1.0000	Unknown	
35	4886-005 SPK TV = 0.8	1.0000	Unknown	
36	CCV	1.0000	Unknown	
37	CCB	1.0000	Unknown	- airspike - < LOQ
38	R0904905-001	100.0000	Unknown	- rpt c# 110 - str.
39	R0904942-002	4.0000	Unknown	
40	R0904769-017	10.0000	Unknown	0.28g → 25 mL
41	R0904769-022	10.0000	Unknown	0.27g →
42	4769-022 DUP	10.0000	Unknown	0.26g →
43	4769-022 SPK TV = 76.9	10.0000	Unknown	0.26g →
44	R0904769-023	10.0000	Unknown	0.25g →
45	R0904769-024	10.0000	Unknown	0.29g →
46	R0904769-025	10.0000	Unknown	0.26g →
47	R0904797-001	10.0000	Unknown	0.28g →
48	CCV	1.0000	Unknown	
49	CCB	1.0000	Unknown	
50	R0904797-002	10.0000	Unknown	0.26g → 25mL
51	R0904797-003	10.0000	Unknown	0.27g →
52	R0904797-004	10.0000	Unknown	0.29g →
53	R0904797-005	10.0000	Unknown	0.29g →
54	R0904797-006	10.0000	Unknown	0.24g →
55	R0904797-007	10.0000	Unknown	0.28g →
56	R0904797-008	10.0000	Unknown	- airspike - rpt c# 111 - 1/
57	R0904797-009	10.0000	Unknown	0.25g → 25mL
58	R0904797-010	10.0000	Unknown	0.25g →
59	R0904797-011	10.0000	Unknown	0.26g →
60	CCV	1.0000	Unknown	
61	CCB	1.0000	Unknown	
62	R0904797-012	10.0000	Unknown	0.28g → 25mL
63	R0904797-015	10.0000	Unknown	0.27g →
64	4797-015 DUP	10.0000	Unknown	0.28g →
65	4797-015 SPK, TV = 74.07	10.0000	Unknown	- airspike - rpt c# 112 - 1
66	R0904797-016	10.0000	Unknown	0.27g → 25mL
67	R0904797-017	10.0000	Unknown	0.29g →
68	R0904797-018	10.0000	Unknown	0.27g →
69	R0904797-019	10.0000	Unknown	0.30g →
70	R0904797-022	10.0000	Unknown	} rpt c# 113, 114 - 1/4
71	4797-022 DUP	10.0000	Unknown	
72	CCV	1.0000	Unknown	
73	CCB	1.0000	Unknown	
74	4797-022 SPK TV = 74.07	10.0000	Unknown	- rpt c# 115 - 1/4
75	R0904797-023	10.0000	Unknown	0.26g → 25mL
76	R0904797-024	10.0000	Unknown	0.28g →
77	R0904797-025	10.0000	Unknown	0.30g →

Cup #	Sample ID	Manual Dilution	Sample Type	
78	R0904843-001	10.0000	Unknown	0.29g → 25mL
79	R0904843-002	10.0000	Unknown	0.26g →
80	R0904843-003	10.0000	Unknown	0.36g →
81	R0904843-004	10.0000	Unknown	0.28g →
82	R0904843-005	10.0000	Unknown	0.28g →
83	R0904843-006	10.0000	Unknown	0.27g → ↓
84	CCV	1.0000	Unknown	
85	CCB	1.0000	Unknown	
86	R0904843-007	10.0000	Unknown	0.25g → 25mL
87	R0904843-008	10.0000	Unknown	0.27g → ↓
88	R0904843-009	10.0000	Unknown	- airspike - rpt @ #116
89	R0904843-010	10.0000	Unknown	- airspikes - rpt @ #11
90	4843-010 DUP - air not integrated	10.0000	Unknown	0.26g → 25mL
91	4843-010 SPK TV = 71.43	10.0000	Unknown	0.28g →
92	R0904843-011	10.0000	Unknown	0.27g →
93	R0904843-012	10.0000	Unknown	0.30g →
94	R0904843-013	10.0000	Unknown	0.28g →
95	R0904843-014	10.0000	Unknown	0.27g → ↓
96	CCV	1.0000	Unknown	
97	CCB	1.0000	Unknown	
98	R0904792-001 RPT 1/4	4.0000	Unknown	
99	R0904792-002 RPT 1/4	4.0000	Unknown	
100	R0904792-003 RPT 1/4	4.0000	Unknown	
101	R0904792-004 RPT 1/4	4.0000	Unknown	
102	R0904792-005 RPT 1/4	4.0000	Unknown	
103	R0904792-006 RPT 1/4	4.0000	Unknown	
104	R0904880-002 RPT 1/4	4.0000	Unknown	
105	R0904886-005 RPT 1/4	4.0000	Unknown	
106	4886-005 DUP RPT 1/4	4.0000	Unknown	
107	4886-005SPKRPT1/5TV = 0.8	4.0000	Unknown	
108	CCV	1.0000	Unknown	
109	CCB	1.0000	Unknown	
110	R0904905-001 RPT STR	1.0000	Unknown	
111	R0904797-008 RPT 1/10	10.0000	Unknown	0.27g → 25mL
112	R0904797-015SPKRPTTV = 74.1	10.0000	Unknown	0.27g →
113	R0904797-022 RPT 1/4	4.0000	Unknown	0.27g →
114	4797-022 DUP RPT 1/4	4.0000	Unknown	0.28g →
115	4797-022SPKRPT1/4TV = 74.1	4.0000	Unknown	0.27g →
116	R0904843-009 RPT 1/10	10.0000	Unknown	0.29g →
117	R0904843-010~~SPKRPT1/10TV =~~ mm 9/9/9	10.0000	Unknown	0.29g → ↓
118	CCV	1.0000	Unknown	
119	CCB	1.0000	Unknown	

OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 1 to 25

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
1	ICV TV= 0.8	09 Sep 2009	10:29:23	1	0.7999	1.0	1.00	
2	ICB	09 Sep 2009	10:30:07	1	0.0048	1.0	1.00	
3	PB-RL	09 Sep 2009	10:30:50	1	0.0048	1.0	1.00	
4	LCS-RL INORG. TV= 0.8	09 Sep 2009	10:31:34	1	0.7966	1.0	1.00	
5	LCS-RL ORG. TV= 0.8	09 Sep 2009	10:32:17	1	0.8334	1.0	1.00	
6	PB-1 SOIL	09 Sep 2009	10:32:59	1	0.0114	1.0	1.00	= <5.00
7	LCS-1 SOIL INORG TV= 80	09 Sep 2009	10:33:42	1	0.7988	1.0	1.00	= 79.88
8	LCS-1 SOIL ORG TV= 80	09 Sep 2009	10:34:24	1	0.8361	1.0	1.00	= 83.61
9	PB-2 SOIL	09 Sep 2009	10:35:07	1	0.0127	1.0	1.00	= <5.00
10	LCS-2 SOIL INORG	09 Sep 2009	10:35:49	1	0.8089	1.0	1.00	= 80.89
11	LCS-2 SOIL ORG	09 Sep 2009	10:36:32	1	0.8342	1.0	1.00	= 83.42
12	CCV	09 Sep 2009	10:37:14	1	0.7998	1.0	1.00	
13	CCB	09 Sep 2009	10:37:56	1	0.0048	1.0	1.00	
14	CRDL - 0.100	09 Sep 2009	10:38:37	1	0.0983	1.0	1.00	
15	CRDL - 0.050	09 Sep 2009	10:39:19	1	0.0528	1.0	1.00	
16	RQ0908042-01 MB	09 Sep 2009	10:40:02	1	0.0116	1.0	1.00	
17	R0904817-001	09 Sep 2009	10:40:46	1	0.0777	1.0	1.00	
18	RQ0908043-01 MB	09 Sep 2009	10:41:30	1	0.0112	1.0	1.00	
19	R0904817-002	09 Sep 2009	10:42:13	1	0.0461	1.0	1.00	
20	R0904818-001	09 Sep 2009	10:42:57	1	3.3043	4.0	1.00	
21	R0904769-001	09 Sep 2009	10:43:40	1	0.0111	1.0	1.00	
22	4769-001 DUP	09 Sep 2009	10:44:23	1	0.0114	1.0	1.00	
23	4769-001 SPK TV= 0.8	09 Sep 2009	10:45:05	1	0.7945	1.0	1.00	
24	CCV	09 Sep 2009	10:45:48	1	0.8035	1.0	1.00	
25	CCB	09 Sep 2009	10:46:31	1	0.0048	1.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 26 to 50

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
26	R0904792-001	09 Sep 2009	10:47:13	1	4.3701	1.0	1.00	- rpt c# 98-1/4
27	R0904792-002	09 Sep 2009	10:47:56	1	3.6244	1.0	1.00	- rpt c #99-1/4
28	R0904792-003	09 Sep 2009	10:48:38	1	4.1672	1.0	1.00	- rpt c #100-1/4
29	R0904792-004	09 Sep 2009	10:49:20	1	3.2038	1.0	1.00	- rpt c #101-1/4
30	R0904792-005	09 Sep 2009	10:50:01	1	4.0019	1.0	1.00	- rpt c #102-1/4
31	R0904792-006	09 Sep 2009	10:50:45	1	3.6416	1.0	1.00	- rpt c #103-1/4
32	R0904880-002	09 Sep 2009	10:51:29	1	4.6948	1.0	1.00	- rpt c #104-1/4
33	R0904886-005	09 Sep 2009	10:52:12	1	3.4582	1.0	1.00	} rpt c #105 → 107-1/4
34	4886-005 DUP	09 Sep 2009	10:52:56	1	3.4251	1.0	1.00	
35	4886-005 SPK TV= 0.8	09 Sep 2009	10:53:39	1	4.1739	1.0	1.00	
36	CCV	09 Sep 2009	10:54:23	1	0.7867	1.0	1.00	
37	CCB	09 Sep 2009	10:55:06	1	0.0048	1.0	1.00	- air spike. < LOQ
38	R0904905-001	09 Sep 2009	10:55:49	1	0.4794	100.0	1.00	- rpt c #110-str.
39	R0904942-002	09 Sep 2009	10:56:32	1	3.4283	4.0	1.00	
.28g	~~40~~ R0904769-017	09 Sep 2009	10:57:14	1	8.0661	10.0	1.00	= 720.19
.27g	41 R0904769-022	09 Sep 2009	10:57:57	1	7.6946	10.0	1.00	= 712.46
.26g	42 4769-022 DUP	09 Sep 2009	10:58:39	1	6.5636	10.0	1.00	= 631.12
.26g	43 4769-022 SPK TV= 76.9	09 Sep 2009	10:59:22	1	8.1906	10.0	1.00	= 787.56
.25g	44 R0904769-023	09 Sep 2009	11:00:04	1	10.0984	10.0	1.00	= 1009.84
29g	45 R0904769-024	09 Sep 2009	11:00:47	1	7.8900	10.0	1.00	= ~~789.0~~ 680.17 Amalgal, 9
.26g	46 R0904769-025	09 Sep 2009	11:01:31	1	5.4587	10.0	1.00	= 524.88
.39	47 R0904797-001	09 Sep 2009	11:02:15	1	9.3929	10.0	1.00	= 838.65
	48 CCV	09 Sep 2009	11:02:58	1	0.7948	1.0	1.00	
	49 CCB	09 Sep 2009	11:03:42	1	0.0048	1.0	1.00	
1.26g	50 R0904797-002	09 Sep 2009	11:04:26	1	7.4481	10.0	1.00	= 716.16

OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 51 to 75

	Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
279	51	R0904797-003	09 Sep 2009	11:05:09	1	5.8025	10.0	1.00	= 537.27
299	52	R0904797-004	09 Sep 2009	11:05:53	1	8.2854	10.0	1.00	= 714.26
.29g	53	R0904797-005	09 Sep 2009	11:06:36	1	7.6080	10.0	1.00	= 655.86
.269	54	R0904797-006	09 Sep 2009	11:07:20	1	5.9516	10.0	1.00	= 572.27
.289	55	R0904797-007	09 Sep 2009	11:08:02	1	9.3428	10.0	1.00	= 834.18
	56	R0904797-008	09 Sep 2009	11:08:45	1	7.9652	10.0	1.00	- air spike - rpt of #111 - 1/10
.259	57	R0904797-009	09 Sep 2009	11:09:28	1	9.6642	10.0	1.00	= 966.42
.259	58	R0904797-010	09 Sep 2009	11:10:10	1	8.4797	10.0	1.00	= 847.97
269	59	R0904797-011	09 Sep 2009	11:10:53	1	8.1707	10.0	1.00	= 785.64
	60	CCV	09 Sep 2009	11:11:35	1	0.8063	1.0	1.00	
	61	CCB	09 Sep 2009	11:12:20	1	0.0048	1.0	1.00	
.289	62	R0904797-012	09 Sep 2009	11:13:04	1	7.5077	10.0	1.00	= 670.33
.279	63	R0904797-015	09 Sep 2009	11:13:48	1	9.0315	10.0	1.00	= 836.25
.289	64	4797-015 DUP	09 Sep 2009	11:14:32	1	9.6701	10.0	1.00	= 863.40
	65	4797-015 SPK TV= 74.07	09 Sep 2009	11:15:15	1	10.3888	10.0	1.00	- air spike - rpt of #112 - 1/10
.279	66	R0904797-016	09 Sep 2009	11:15:59	1	8.4886	10.0	1.00	= 785.98
.299	67	R0904797-017	09 Sep 2009	11:16:42	1	8.1024	10.0	1.00	= 698.48
.279	68	R0904797-018	09 Sep 2009	11:17:26	1	5.6653	10.0	1.00	= 524.56
.309	69	R0904797-019	09 Sep 2009	11:18:10	1	7.1221	10.0	1.00	= 593.51
	70	R0904797-022	09 Sep 2009	11:18:53	1	2.3835	10.0	1.00	} rpt of #113, 114 - 1/4
	71	4797-022 DUP	09 Sep 2009	11:19:36	1	2.5655	10.0	1.00	
	72	CCV	09 Sep 2009	11:20:18	1	0.7991	1.0	1.00	
	73	CCB	09 Sep 2009	11:21:01	1	0.0048	1.0	1.00	
	74	4797-022 SPK TV= 74.07	09 Sep 2009	11:21:43	1	3.2491	10.0	1.00	- rpt of #115 - 1/4
269	75	R0904797-023	09 Sep 2009	11:22:26	1	3.4991	10.0	1.00	= 336.45

OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 76 to 100

	Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
289	76	R0904797-024	09 Sep 2009	11:23:11	1	7.4182	10.0	1.00	= 662.34
309	77	R0904797-025	09 Sep 2009	11:23:55	1	7.8393	10.0	1.00	= 653.28
1.299	78	R0904843-001	09 Sep 2009	11:24:40	1	8.1222	10.0	1.00	= 700.19
1.269	79	R0904843-002	09 Sep 2009	11:25:23	1	4.5014	10.0	1.00	= 432.83
1.309	80	R0904843-003	09 Sep 2009	11:26:07	1	4.9495	10.0	1.00	= 412.47
1.289	81	R0904843-004	09 Sep 2009	11:26:50	1	9.8263	10.0	1.00	= 877.35
1.289	82	R0904843-005	09 Sep 2009	11:27:34	1	7.3561	10.0	1.00	= 656.79
.279	83	R0904843-006	09 Sep 2009	11:28:17	1	7.6750	10.0	1.00	= 710.65
	84	CCV	09 Sep 2009	11:29:01	1	0.8049	1.0	1.00	
	85	CCB	09 Sep 2009	11:29:45	1	0.0048	1.0	1.00	
1.259	86	R0904843-007	09 Sep 2009	11:30:28	1	10.4218	10.0	1.00	= 1042.18
1.279	87	R0904843-008	09 Sep 2009	11:31:11	1	7.1597	10.0	1.00	= 662.94
	88	R0904843-009	09 Sep 2009	11:31:53	1	6.0132	10.0	1.00	-airspike-rpt@#116
	89	R0904843-010	09 Sep 2009	11:32:36	1	9.4651	10.0	1.00	-airspikes-rpt@#117
0.269	90	4843-010 DUP	09 Sep 2009	11:33:18	1	9.0517	10.0	1.00	= 870.36 air not integrated
0.289	91	4843-010 SPK TV= 71.43	09 Sep 2009	11:34:03	1	11.0569	10.0	1.00	= 987.22
0.279	92	R0904843-011	09 Sep 2009	11:34:48	1	5.9131	10.0	1.00	= 547.09
0.309	93	R0904843-012	09 Sep 2009	11:35:32	1	9.2938	10.0	1.00	= 774.48
0.289	94	R0904843-013	09 Sep 2009	11:36:17	1	8.9031	10.0	1.00	= 794.92
0.279	95	R0904843-014	09 Sep 2009	11:37:02	1	7.6609	10.0	1.00	= 709.34
	96	CCV	09 Sep 2009	11:37:45	1	0.8063	1.0	1.00	
	97	CCB	09 Sep 2009	11:38:29	1	0.0048	1.0	1.00	
	98	R0904792-001 RPT 1/4	09 Sep 2009	11:39:12	1	4.5440	4.0	1.00	
	99	R0904792-002 RPT 1/4	09 Sep 2009	11:39:56	1	3.6489	4.0	1.00	
	100	R0904792-003 RPT 1/4	09 Sep 2009	11:40:39	1	4.2994	4.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA

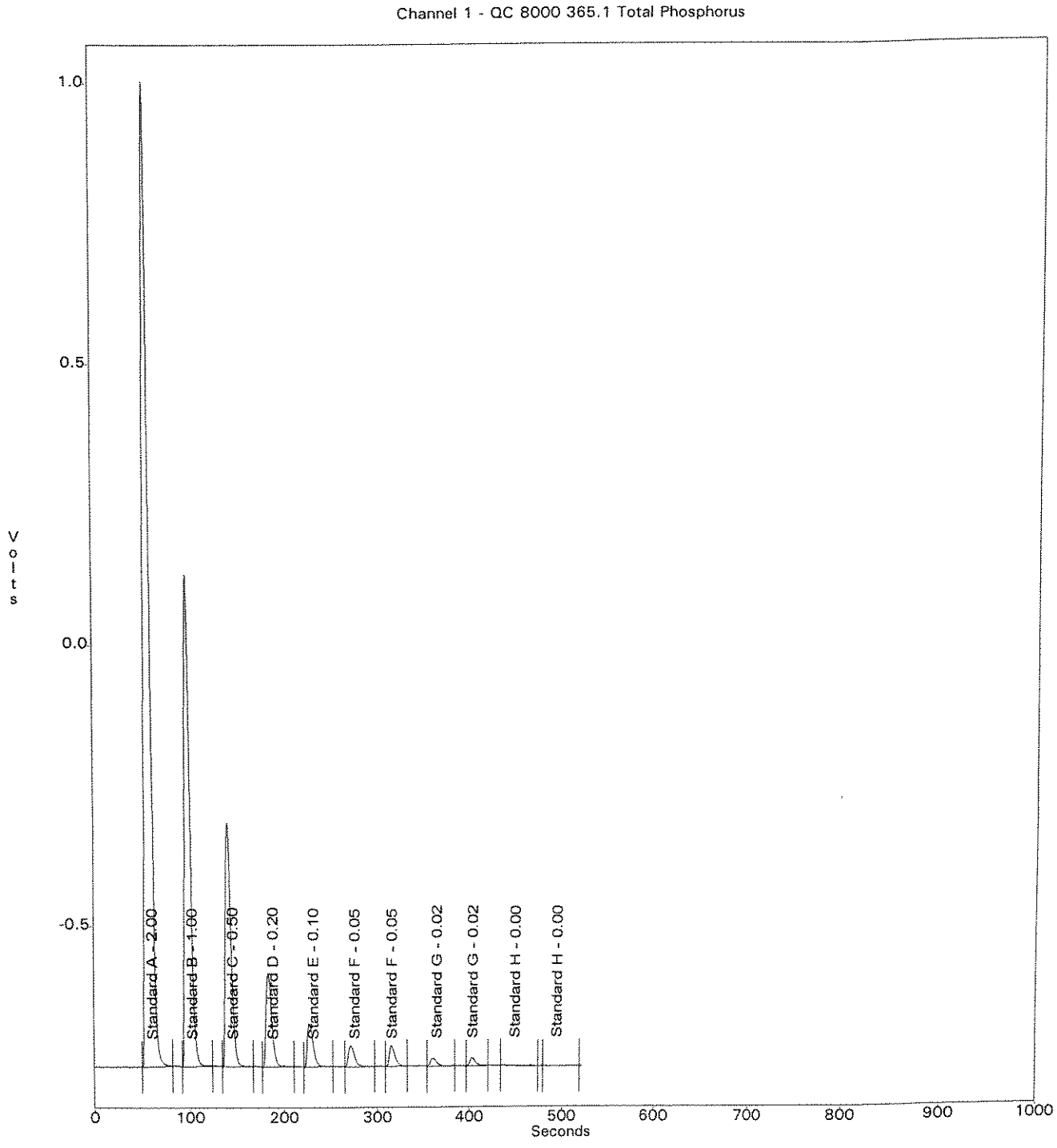
Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 101 to 125

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
101	R0904792-004 RPT 1/4	09 Sep 2009	11:41:23	1	3.2533	4.0	1.00	
102	R0904792-005 RPT 1/4	09 Sep 2009	11:42:06	1	4.1943	4.0	1.00	
103	R0904792-006 RPT 1/4	09 Sep 2009	11:42:49	1	3.6633	4.0	1.00	
104	R0904880-002 RPT 1/4	09 Sep 2009	11:43:32	1	4.8830	4.0	1.00	
105	R0904886-005 RPT 1/4	09 Sep 2009	11:44:14	1	3.5053	4.0	1.00	
106	4886-005 DUP RPT 1/4	09 Sep 2009	11:44:59	1	3.5039	4.0	1.00	
107	4886-005SPKRPT1/5TV=0.8	09 Sep 2009	11:45:43	1	4.3921	4.0	1.00	
108	CCV	09 Sep 2009	11:46:28	1	0.8047	1.0	1.00	
109	CCB	09 Sep 2009	11:47:13	1	0.0048	1.0	1.00	
110	R0904905-001 RPT STR	09 Sep 2009	11:47:57	1	0.0899	1.0	1.00	
111	R0904797-008 RPT 1/10	09 Sep 2009	11:48:42	1	7.1488	10.0	1.00	= 661.93
112	R0904797-015SPKRPTTV=74.1	09 Sep 2009	11:49:26	1	10.4454	10.0	1.00	= 967.17
113	R0904797-022 RPT 1/4	09 Sep 2009	11:50:09	1	2.6281	4.0	1.00	= 243.34
114	4797-022 DUP RPT 1/4	09 Sep 2009	11:50:53	1	2.9123	4.0	1.00	= 260.03
115	4797-022SPKRPT1/4TV=74.1	09 Sep 2009	11:51:36	1	4.0335	4.0	1.00	= 373.47
116	R0904843-009 RPT 1/10	09 Sep 2009	11:52:20	1	5.9338	10.0	1.00	= 511.53
117	R0904843-010~~SPKRPT1/10TV=~~	09 Sep 2009	11:53:03	1	9.3755	10.0	1.00	= 808.23
118	CCV	09 Sep 2009	11:53:47	1	0.8092	1.0	1.00	
119	CCB	09 Sep 2009	11:54:30	1	0.0048	1.0	1.00	

09/9/09

.279 .279 .279 .289 .279 .299 .299

OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:19:29
DATA FILENAME: C:\OMNION\DATA\0909090A.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA



OPERATOR: NMEAD
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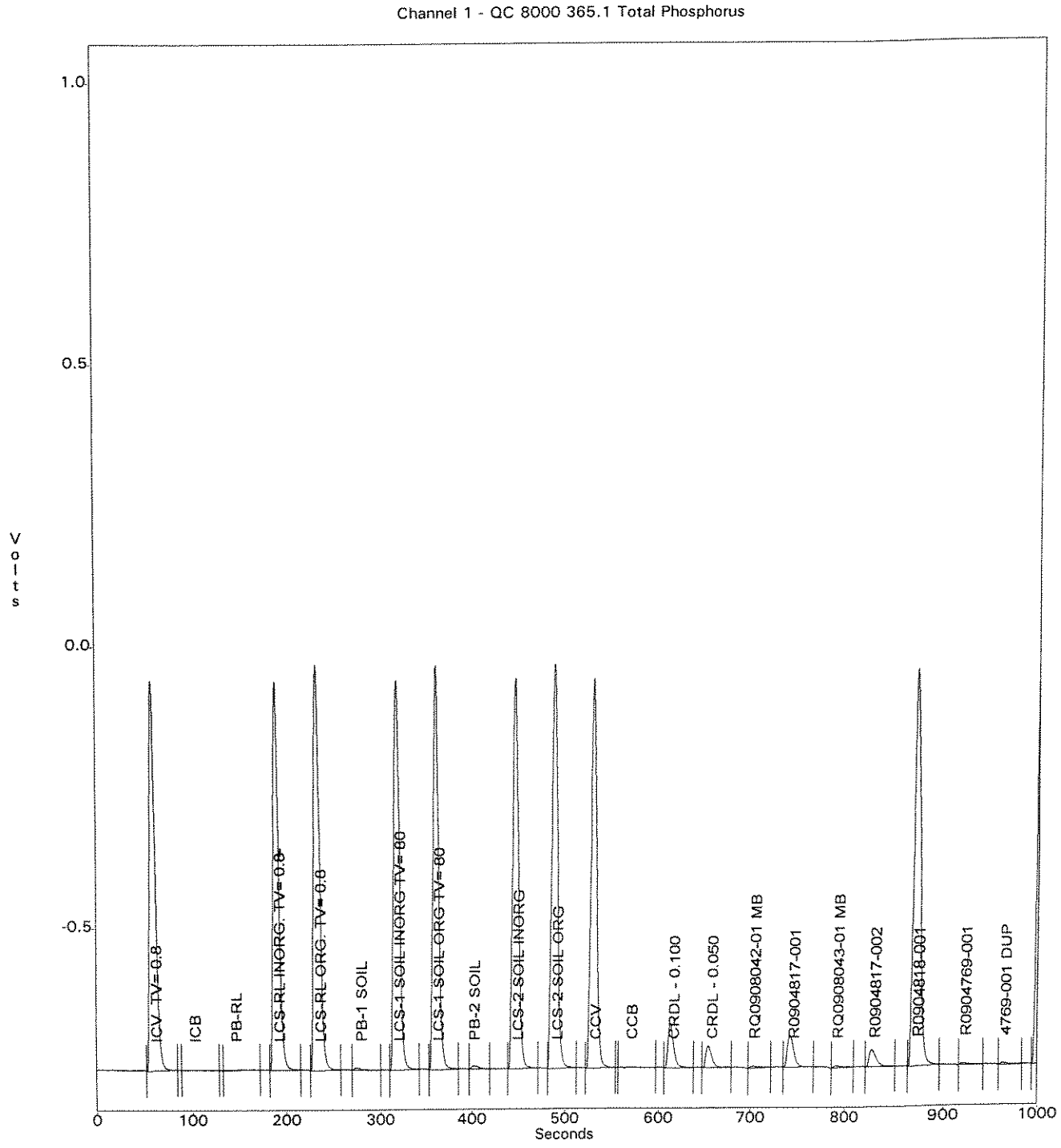

OPERATOR: NMEAD
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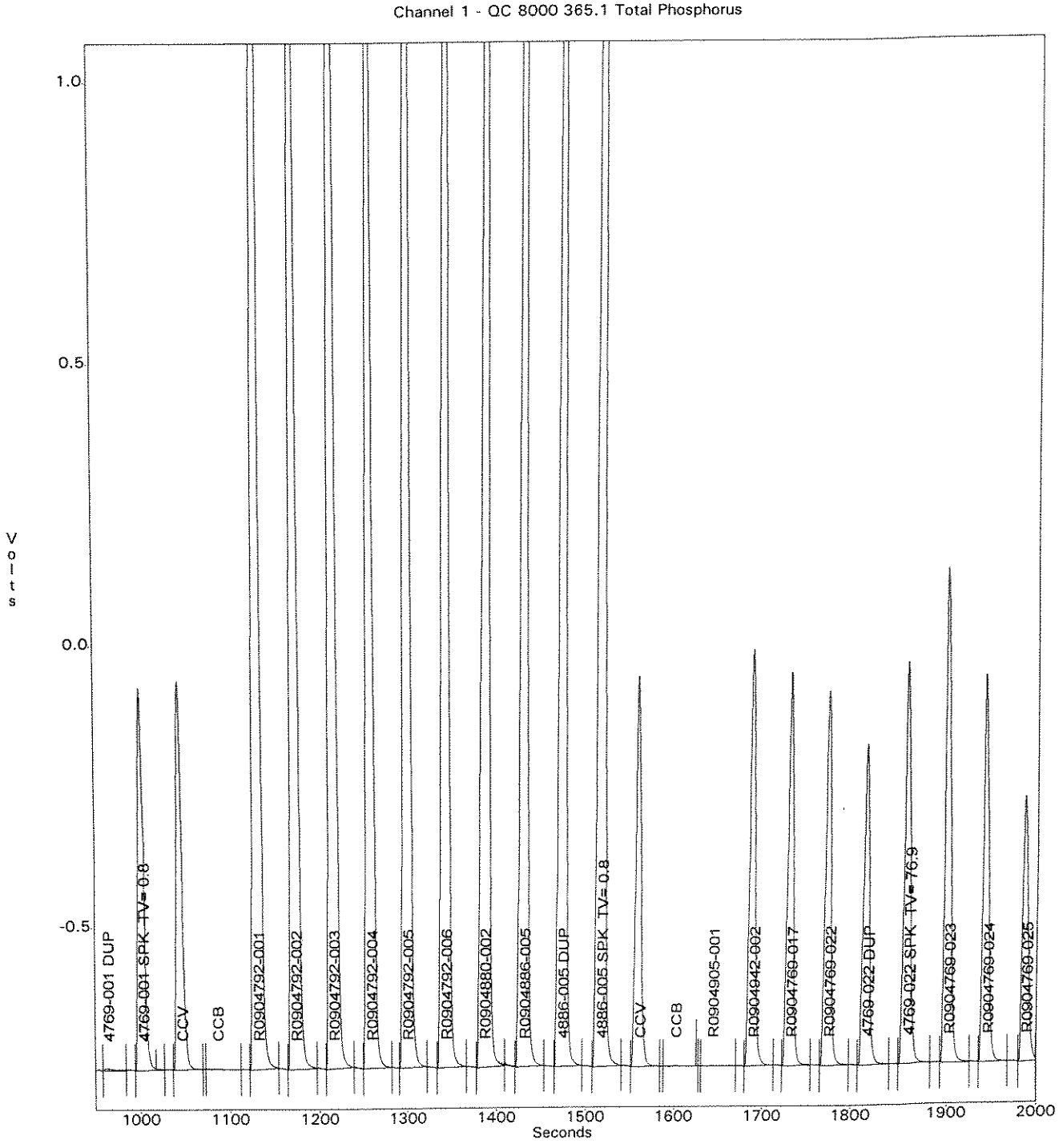
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA



OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
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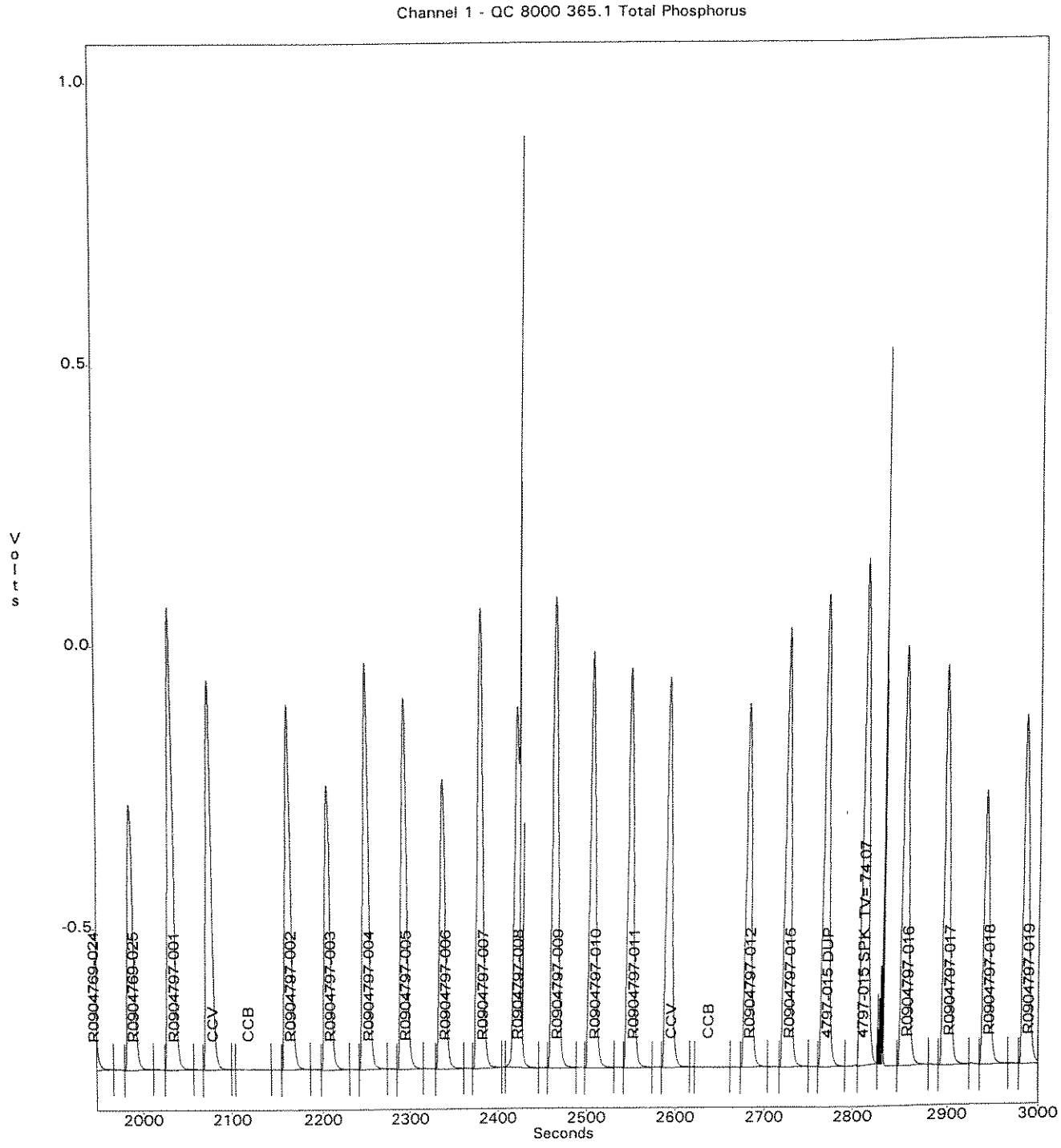
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA



OPERATOR: NMEAD
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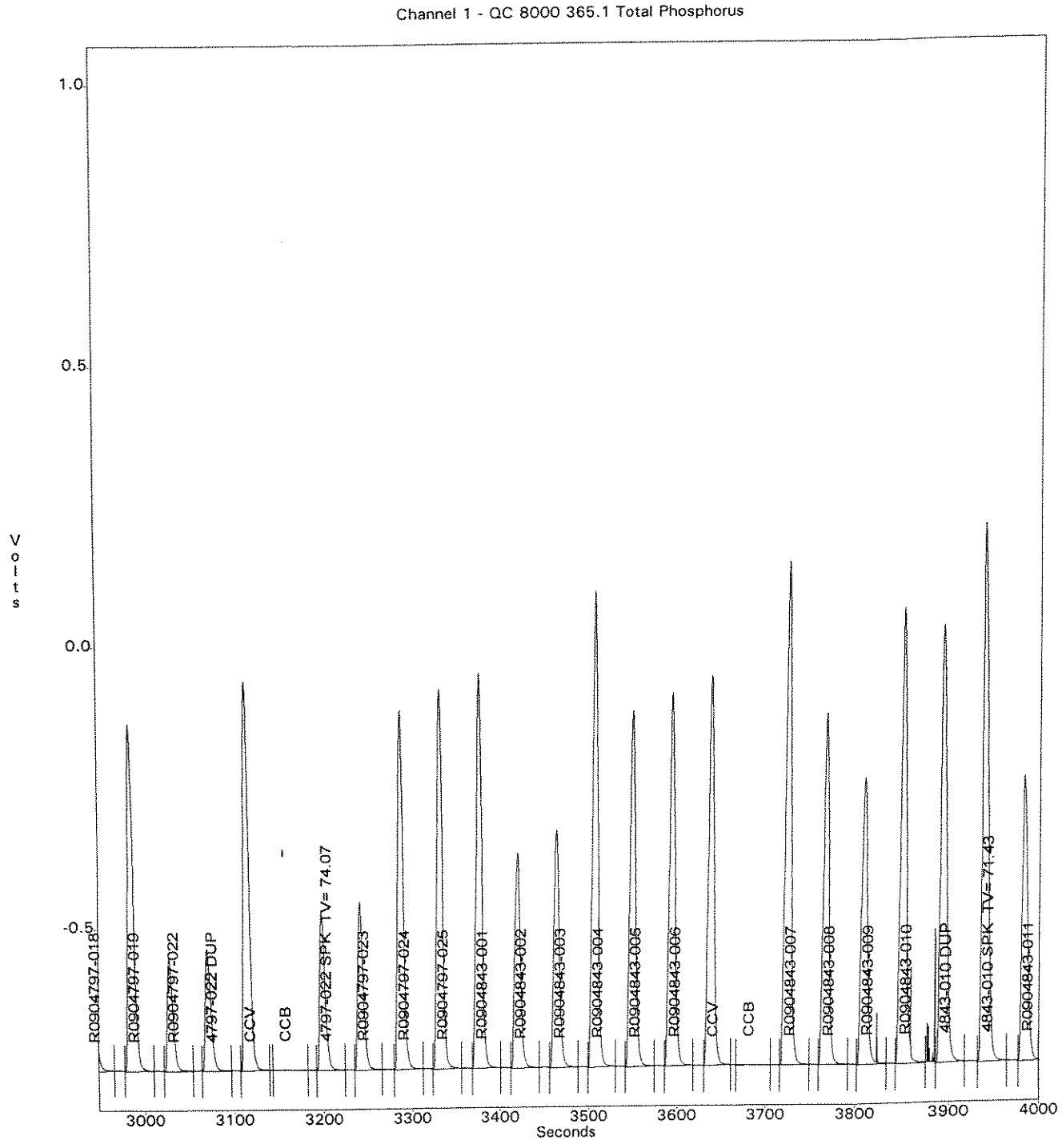
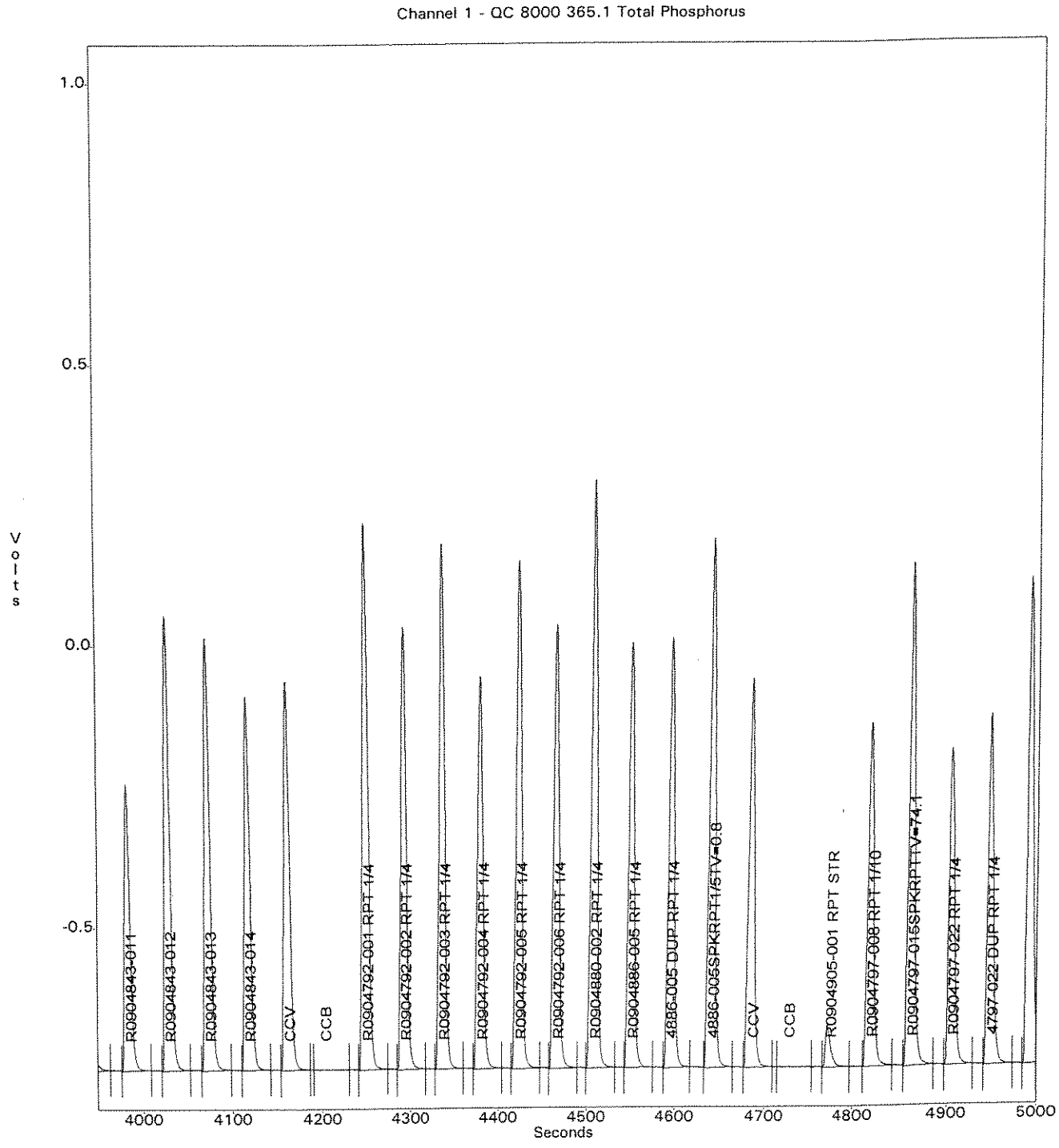
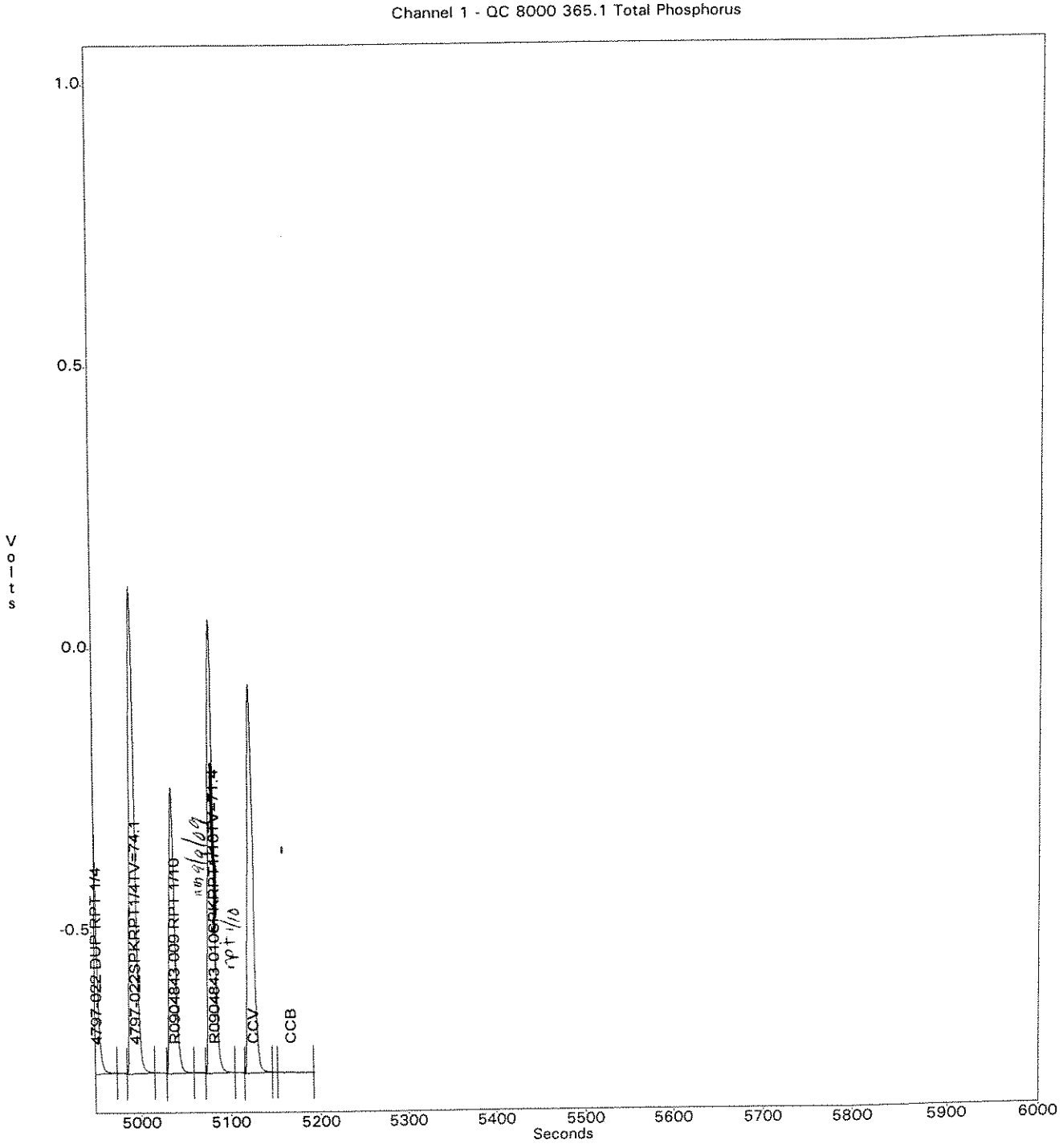
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA



OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA



OPERATOR: NMEAD
ACQ. TIME: Sep 9, 2009 10:29:20
DATA FILENAME: C:\OMNION\DATA\090909A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0909090A.TRA



OPERATOR:	NMEAD
ACQ. TIME:	Sep 9, 2009 10:19:29
DATA FILENAME:	C:\OMNION\DATA\0909090A.FDT
METHOD FILENAME:	C:\OMNION\METHODS\TPO4B.MET
TRAY FILENAME:	C:\OMNION\TRAYS\0909090A.TRA

TRAY DESCRIPTION:

Created:	Sep 9, 2009 9:08:33
Modified:	Sep 9, 2009 10:18:34

QC 8000 365.1 TPO4 - RUN LOG - TPO4B 0909090A

DATA DESCRIPTION:

Created:	Sep 9, 2009 10:19:29
Modified:	Sep 9, 2009 10:19:29

Method - Ch. 1 (QC 8000 365.1 Total Phosphorus)

METHOD DESCRIPTION:

Created:	Feb 25, 2008 14:38:43
Modified:	Sep 3, 2009 10:28:07

Total Phosphorus - 2.00 -- 0.05

ANALYTE DATA:

Analyte Name:	QC 8000 365.1 Total Phosphorus
Concentration Units:	mg/L
Chemistry:	Direct
Inject to Peak Start (s):	11.0
Peak Base Width (s):	18.000
% Width Tolerance:	60.000
Threshold:	6416.000
Autodilution Trigger:	Off
QuikChem Method:	10-115-01-1-E

CALIBRATION DATA:

Levels:

1 : 2.000	2 : 1.000	3 : 0.500	4 : 0.200
5 : 0.100	6 : 0.050	7 : 0.020	8 : 0.000

Calibration Rep Handling:	Average
Calibration Fit Type:	1st Order Poly
Force Though Zero:	No
Weighting Method:	None
Concentration Scaling:	None

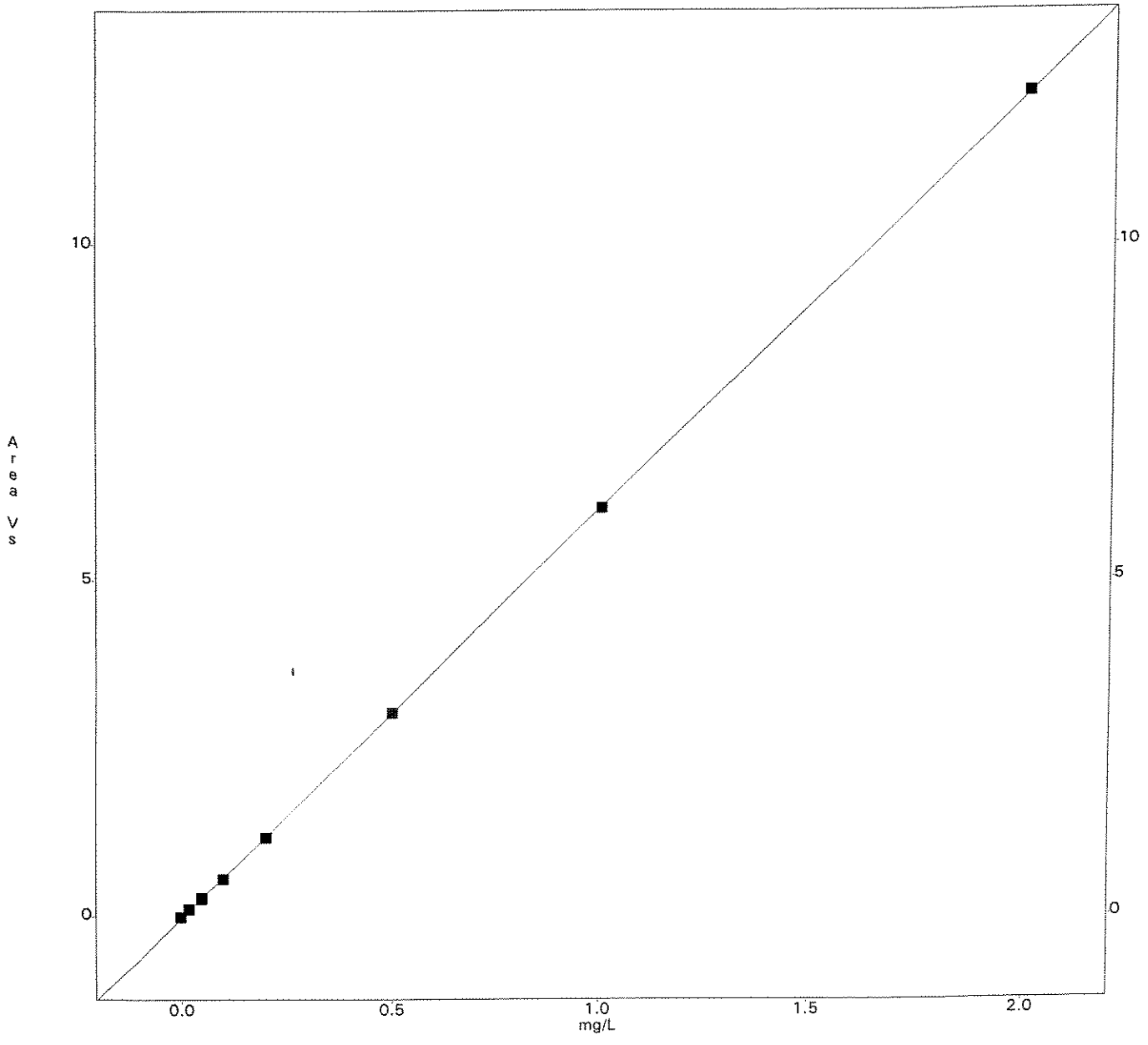
QC 8000 365.1 Total Phosphorus

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	12267982	2.00	12267982					0.0	0.0	-0.1
2	6080535	1.00	6080535					0.0	0.0	0.5
3	3038757	0.50	3038757					0.0	0.0	0.1
4	1183658	0.20	1183658					0.0	0.0	1.2
5	560867	0.10	560867					0.0	0.0	3.9
6	278992	0.05	273922	284061				7169.4	2.6	-0.5
7	115238	0.02	111630	118845				5101.8	4.4	-17.8
8	0	0.00	0	0				0.0	0.0	

Pipette ID: E-2

1st Order Poly
Conc = 1.629e-007 Area + 4.794e-003
r = 1.0000

Scaling: None - Weighting: None



Printed: Wednesday, September 09, 2009 - 10:28 AM

Columbia Analytical Services

1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: N. mead Date: 9/9/09

Analysis: Total Phosphorus, 0.05 - 2.0 mg/L Instrument: Lachat

Quality Control:

	Same as Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC85114C, 02/25/08	WC72002P, 1/26/09				
b) I/CCV Preparation:	WC92069F, 08/24/09	WC85232H, 11/11/08	0.8	10	10	0.80
c) Inorganic LCS Prep:	WC85114F, 2/25/08	WC72002P, 1/26/09	0.2	100	25	0.80
d) Organic LCS Prep:	WC85052A, 10/10/07	WC85221B, 10/14/08	0.2	100	25	0.80
e) Matrix Spike Prep.:	WC85114F, 2/25/08	WC72002P, 1/26/09	0.2	100	25	0.80

Instrument log filled in? (Y) (N)

Packages:

Copy and attach Standards Preparation.

Comments:

p:\greg\forms\covert.po4

TITLE **PROJECT**

Continued from page

8/24/09 SBR

Ⓐ TKN Digest Reagent

To a 2L vol. flask, add 268g K_2SO_4 (WC92055E) and 14.6g $CuSO_4$ (WC85271E). Fill ~ 1/2 way with UPDI. Slowly add 268mL omnitrace H_2SO_4 (WC92064B). Allow to dissolve and cool. Bring to vol. with UPDI. Store @ RT in amber glass. Exp 9/24/09

5/24/09 DPW

Recieved from EMD

Ⓑ 4x4L chloroform. Cat#: CX1059-1, lot#: 48171. Store@RT, exp: 8/24/2012, Cas#: 67-66-3.

Ⓒ MBAS Wash Solution

To a tared 2L vol. flask add: 100g sodium phosphate monobasic monohydrate (WC92035H) and 13.7mL conc. H_2SO_4 (WC92040B). Bring to vol. w/ DI, store@RT. ~~Prep'd~~ DPW 8/24/09 prep'd: 8/21/09, exp: 8/21/2010

Ⓓ MBAS Color Reagent

To a tared 2L vol. flask add: 100g sodium phosphate monobasic monohydrate (WC92035H), 13.7mL conc. H_2SO_4 (WC92040B) and 60mL of methylene blue stock (WC92017E). Bring to volume w/ DI, store@RT. Prep'd: 8/21/09 exp: 8/21/2010.

Ⓔ 1.0ppm LAS Working Standard Stock

Dilute 1.0mL of 1000ppm LAS Standard Stock (WC35268F) to 1L volumetrically w/ DI. Store@4°C, exp: 8/24/2010.

8/24/09 GN

Ⓕ TPO_4 - RL - ICV/CCV, TV = 0.80 ppm

Add 0.8mls of 10ppm Reference Stock (Two 1/10 serial dilution of 1000ppm Reference stock (WC 85232H)) to 9.2mls carrier / Diluent. Make fresh each run

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

2/26/08 RP (A) 0.0250N $Na_2S_2O_3$ - SulAdes

Dilute 50mLs 0.1N $Na_2S_2O_3$ (WC850670) to 200mLs volumetrically w/ DI. Store for 2 weeks at 4°C. Exp. 3/11/08

2/27/08 TC 2/26/08 (B) TPO_4 Reg Level Calibration for IC8000

TC (B) Make a 10ppm Standard Working Stock by preparing two serial dilutions of the 1000ppm TPO_4 Standard Stock (WC720001T)

(C) Cal. Standards - fresh per run

Std	Std Conc. (mg/L)	mls of 10ppm working Stock (WC850670)	mls Carrier/Diluent TC 2/26/08
A	2.00	2.0	8.0
B	1.00	1.0	9.0
C	~~0.05~~ 0.50	0.50	9.5
D	0.20	1/10 dilution of Std A	
E	0.10	1/10 dilution of Std B	
F	0.050	1/10 dilution of Std C	
G	0.020	1/10 dilution of Std D.	
H	0.000	use Carrier/Diluent only	

~~(D) CCV/ICV TV=1.50~~ TC 2/26/08 ~~Add~~

(D) Make a 10ppm Reference Working Stock by preparing two serial dilutions of the 1000ppm TPO_4 Reference Stock (WC850711F)

(E) ICV/CCV TV=1.50

Add 1.50mls of the 10ppm Reference Working Stock (WC850114D) to 8.5mls Carrier/Diluent. Fresh per run.

(F) Inorganic/Organic TPO_4-RL LCS/MS TV=0.80ppm

To 25mls sample or LIPDI add 0.20mLs of 100ppm Standard Stock (prepared by making a 1/10 dilution of the 1000ppm Standard Stock (WC720001T)

Organic LCS is prepared from 100ppm Inorganic Standard (WC850711H)

10/10/07

Ⓐ TPO4-RL Organic LCS V=1.40
To 25 mL UPDI in vial add 0.35mL 100ppm Organic Standard (WC85058H)

Ⓑ Organic TPO4 Working Standard 10ppm
-make a 1/10 dilution of 100ppm Organic Phosphorous Standard (WC85051H).

Ⓒ TPO4-LL Organic LCS V=0.025
To 20 mL UPDI in vial add 0.05mL 10ppm Organic TPO4 Working Standard (WC85052B)

11/7/08 NM (A) Buffer - TOTN
- same as WC85226F. Exp. 1 year, 11/7/09.

11/7/08 BB Received from VWR
(B) · (2) x 500g Ascorbic Acid, Cat. # 0938-07, JT. Baker Lot # G29621, CAS # 50-81-7. Store @ RT. Expires 11/7/13

11/10/08 GN (C) Sulfide Reference
To a tared amber jar add ~ 0.4 Na_2S (WC 8230B) and dilute to 100g w/DI. Mixed until dissolved. Store at 4°C for 2 weeks. Exp 11/24/08. Standardize w/each use

11/10/08 GN (D) 0.0250 N $Na_2S_2O_3$ - Sulfides
Dilute 50mls 0.1N $Na_2S_2O_3$ (WC 8502 L) w/DI volumetrically. Store at 4°C for 2 weeks. Exp 11/24/08

11/10/08 SBR (E) TKN Digest Reagent
- same as WC85228G. Exp 12/10/08

11/11/08 NM (F) Post-Digestion Matrix Match - TKN
To a 2-L vol. flask add 800 mL TKN Digest Reagent (WC85232E) and bring to volume w/ uP DI. Mix thoroughly. Pour off 100 mL and discard. Bring back to volume w/ uP DI. Mix thoroughly. Store @ RT in amber glass Exp. 12/10/08.

(G) Hypochlorite - TKN
- Same as WC85220H. Prepare fresh each run.

11/11/08 NM (H) TPO4 1000ppm Reference Stock
4.394 g KH_2PO_4 (WC85054G) previously dried for 2 hours @ 104°C. Dissolve in ~ 800 mLs DI in a 1 liter vol. flask. Bring to volume w/DI. Store in amber glass @ 4°C. for 1 year. Expires 11/11/09.

10/8 3R

(A) TPO4 Low Level 5.6M H_2SO_4

In a 1 liter amber bottle, slowly add ~~550~~ SBR 10/14/08 554g omnitrace H_2SO_4 (WC85194F) to 600g UPDI. Allow to cool. Store @ 4°C for 1 yr. Exp 10/14/09

(B) 100 ppm Organic Phosphorous Standard- TPO4

- Same as WC85051H. Exp 1 yr 10/14/09

'08

(C) NH3 Carrier/Diluent

- same as WC85197E. Prepared solution x 3.

(D) Hypochlorite- NH3

- same as WC85219G. Prepare fresh each run,

LB 10/14/08

(E) Eriochrome Black T: Hardness Indicator

Add 50g NaCl (WC85109J) and 0.25g Eriochrome Black T (~~WC85~~ WC09284E) to a tared 8-cup. Cap and shake well to mix. Store at r.t. exp. 5/31/10

d volumetrically
ottle. @ 4°C

10/9/07 NM (A) NH3 Carrier/Diluent
- same as WC85035A. Prepared solution x 3.

(B) Hypochlorite - NH3 - To a tared 1-L amber jar
- 350 mLs Sodium Hypochlorite (WC85047B)
- 350 mLs UPDI
Prepare fresh each run.

add
l.

10/9/07 TC (C) TKN Digest Reagent
To a 2 liter vol. flask add:
- 268.0 g K_2SO_4 (WC85031A)
- 14.6 g Copper II Sulfate (WC85040A)
to ~900 mL UPDI
Slowly add 268 mL conc. Instra analyzed H_2SO_4 (WC85024E)
Stir until dissolved. Allow to cool. Exp. 1 month

10/9/07 NM (D) Buffer - NH3
- same as WC85021D. Exp 1 year, 10/9/08.

lg
3 (WC85050E)

10/10/07 GN (E) NO_2 Color Reagent - Konelab
- same as WC85032A. exp 1 month 11/10/07

10/10/07 NM (F) Post-Digestion Matrix Match - TKN
To a 2-L vol. flask add 800 mL TKN Digest Reagent (WC85051C) and bring to volume w/ UPDI. mix thoroughly. Pour off 100 mL and discard. Bring back to volume w/ UPDI. mix thoroughly. Store @ RT in amber glass. Exp. 11/9/07.

, Cat# ZX0048-1,
5-6. Store @ R.T.

(G) Hypochlorite - TKN
- same as ~~WC85~~ WC85049G. Prepare fresh each run

r, Cat# 2533-35,
WC85017G.

10/10/07 TC (H) 100ppm Organic Phosphorous Standard - TPO4
In a 1 liter vol. flask dissolve 0.7885g β-Glycerophosphoric Acid, Disodium Salt, 5 Hydrate (WC76143D) in UPDI. Bring to vol. w/ UPDI. Store in amber glass @ 4°C. Exp 1 yr, 10/10/08.

CAS# 154-95-2.
828

✓

00643

Reviewed & Approved
By: CK SD / CK SD 1/26/09
Date: 10/16/06 5/1/07 / 9/10/07

STANDARD STOCK PREP

(Fluoride and Bromide are purchased 1000ppm standards)

Chloride 1000ppm Stock: 1.648g NaCl crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ room temp. for 1 year.

ID Letter	NaCl Source	Analyst	Date Prepared	Date Expires	Final Cl 1000ppm Stock ID
A	WC76259E	CMM	1/26/09	1/26/10	~~WC72002A~~ CMM 1/26/09
B					
C					
D					
E					

Nitrite 1000ppm Stock: 6.07g KNO2 previously dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KNO2 Source	Analyst	Date Prepared	Date Expires	Final NO2 1000ppm Stock ID
F	WC76097D	CMM	1/26/09	1/26/10	WC72002F (7741)
G					
H					
I					
J					

Nitrate 1000ppm Stock: 7.22g KNO3 crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Transfer to amber jar and add 1.0ml Chloroform. Store in amber jar @ room temp. for 6 months.

CK 10/5/06

ID Letter	~~KNO2~~ KNO3 Source	Chloroform Source ID	Analyst	Date Prepared	Date Expires	Final NO3 1000ppm Stock ID
K	WC76114C	WC76170J	FN	10/5/06	4/5/07	WC72002K
L	WC76114C	WC76234A	FN	3/26/07	9/26/07	WC72002L
M	WC76114C	WC76234A	NM	9/21/07	3/21/08	WC72002M
N	WC76114C	WC76234A	CMM	3/25/08	9/25/08	WC72002N
O						

OPO4 / TPO4 1000ppm Stock: 4.394g KH2PO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KH2PO4 Source	Analyst	Date Prepared	Date Expires	Final OPO4/TPO4 1000ppm Stock ID
P	WC65C85E	CMM	1/26/09	1/26/10	WC72002P (7742)
Q					
R					
S					
T					

Sulfate 1000ppm Stock: 1.479g Na2SO4 dried overnight at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	Na2SO4 Source	Analyst	Date Prepared	Date Expires	Final SO4 1000ppm Stock ID
U	WC76153E	CMM	1/27/09	1/27/10	WC72002U (7052)
V					
W					
X					
Y					

Analytical Results Summary

3 rerun A

Instrument Name: R-Balance-02 **Analyst:** EWOLFE **Analysis Lot:** 169155 **Method/Testcode:** SM 2540 C/TDS SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908259-01	Solids, Total Dissolved (TDS)	MB		Soil	0.00 mg/L	100 mL	10 mg/L U	1	10			9/4/09 10:50	N	IV
RQ0908259-02	Solids, Total Dissolved (TDS)	LCS		Soil	879.25 mg/L	53 mL	879 mg/L	1	10	96		9/4/09 10:50	N	IV
R0904817-001	Solids, Total Dissolved (TDS)	N/A		Soil	207.00 mg/L	100 mL	207 mg/L	1	10			9/4/09 10:50	N	IV
R0904817-002	Solids, Total Dissolved (TDS)	N/A		Soil	202.00 mg/L	100 mL	202 mg/L	1	10			9/4/09 10:50	N	IV
RQ0908042-01	Solids, Total Dissolved (TDS)	MB		Soil	1.00 mg/L	100 mL	10 mg/L U	1	10			9/4/09 10:50	N	IV
RQ0908043-01	Solids, Total Dissolved (TDS)	MB		Soil	3.00 mg/L	100 mL	10 mg/L U	1	10			9/4/09 10:50	N	IV

1 copy

R-4817

Reviewed & Approved

By: BBowe

Date: 9/8/09

95515

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: D Bond Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09
Received By: Date: 9/1/09 1305

Extracts Examined
Yes No

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS)
Method: SM20 2540D
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C
Analyte: Total Solids (TS)
Method SM20 2540B

Analyst: E. WOLFE
Pipet: SUPERMAN/DISP
Date: 9/4/09
Time: 10:50

TS ____ **TDS** X **TSS** ____

LCS Lot: WC92048E TV: **913** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
1		MB	A	100		Gross (A) 1:	85.1449	Gross (A) 3:		0.00
						Gross (A) 2:	85.1454			
						B)	85.1449	A-B=	0.0000	
2		LCS	VA	53		Gross (A) 1:	71.6932	Gross (A) 3:		900.00
						Gross (A) 2:	71.6937			
						B)	71.6455	A-B=	0.0477	
3		R0904776-046	F4	55		Gross (A) 1:	83.7134	Gross (A) 3:		1623.64
						Gross (A) 2:	83.7129			
						B)	83.6236	A-B=	0.0893	
4		R0904932-001	WOW	99		Gross (A) 1:	80.9274	Gross (A) 3:		597.98
						Gross (A) 2:	80.9270			
						B)	80.8678	A-B=	0.0592	
5		R0904933-001	47	100		Gross (A) 1:	83.4076	Gross (A) 3:		470.00
						Gross (A) 2:	83.4082			
						B)	83.3606	A-B=	0.0470	
6		R0904942-002	CV	3.3		Gross (A) 1:	79.5682	Gross (A) 3:		20060.61
						Gross (A) 2:	79.5681			
						B)	79.5019	A-B=	0.0662	
7		R0904942-002 DUP	FN	3.4		Gross (A) 1:	82.2161	Gross (A) 3:		19970.59
						Gross (A) 2:	82.2162			
						B)	82.1482	A-B=	0.0679	
8		R0904971-002	FT	100		Gross (A) 1:	86.2742	Gross (A) 3:		814.00
						Gross (A) 2:	86.2748			
						B)	86.1928	A-B=	0.0814	
9		R0904971-005	LL	48		Gross (A) 1:	84.3312	Gross (A) 3:		2362.50
						Gross (A) 2:	84.3315			
						B)	84.2178	A-B=	0.1134	
10		R0904971-008	IR	100		Gross (A) 1:	88.4754	Gross (A) 3:		746.00
						Gross (A) 2:	88.4765			
						B)	88.4008	A-B=	0.0746	
11		R0904999-001	30	0.3		Gross (A) 1:	86.8949	Gross (A) 3:	86.8766	232333.33
						Gross (A) 2:	86.8764			
						B)	86.8067	A-B=	0.0697	
12		R0904960-001	OX	31		Gross (A) 1:	89.4458	Gross (A) 3:		4058.06
						Gross (A) 2:	89.4438			
						B)	89.3180	A-B=	0.1258	
13		R0904960-002	GA	75		Gross (A) 1:	80.3284	Gross (A) 3:		649.33
						Gross (A) 2:	80.3285			
						B)	80.2797	A-B=	0.0487	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS)
Method: SM20 2540D
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C
Analyte: Total Solids (TS)
Method SM20 2540B

Analyst: E. WOLFE
Pipet: SUPERMAN/DISP
Date: 9/4/09
Time: 10:50

TS ____ **TDS** X **TSS** ____

LCS Lot: WC92048E TV: **913** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
14		R0904961-001	T1	99		Gross (A) 1:	82.4687	Gross (A) 3:		658.59
						Gross (A) 2:	82.4688			
						B)	82.4035	A-B=	0.0652	
15		R0904961-002	A10	100		Gross (A) 1:	85.1025	Gross (A) 3:		599.00
						Gross (A) 2:	85.1028			
						B)	85.0426	A-B=	0.0599	
16		R0904961-003	ANT	64		Gross (A) 1:	82.8408	Gross (A) 3:		2178.12
						Gross (A) 2:	82.8433			
						B)	82.7014	A-B=	0.1394	
17		R0904961-004	55	47		Gross (A) 1:	87.3059	Gross (A) 3:		2136.17
						Gross (A) 2:	87.3081			
						B)	87.2055	A-B=	0.1004	
18		R0904961-004 DUP	50	45		Gross (A) 1:	84.8098	Gross (A) 3:		2160.00
						Gross (A) 2:	84.8101			
						B)	84.7126	A-B=	0.0972	
19		R0904961-005	BB	46		Gross (A) 1:	82.2612	Gross (A) 3:		2669.57
						Gross (A) 2:	82.2613			
						B)	82.1384	A-B=	0.1228	
20		R0904961-006	AZ	71		Gross (A) 1:	80.4883	Gross (A) 3:		1121.13
						Gross (A) 2:	80.4886			
						B)	80.4087	A-B=	0.0796	
21		R0904961-007	DA	100		Gross (A) 1:	89.3085	Gross (A) 3:		841.00
						Gross (A) 2:	89.3083			
						B)	89.2242	A-B=	0.0841	
22		R0904961-008	37	83		Gross (A) 1:	84.0634	Gross (A) 3:		1281.93
						Gross (A) 2:	84.0632			
						B)	83.9568	A-B=	0.1064	
23		R0904961-009	UI	37		Gross (A) 1:	87.8647	Gross (A) 3:		5164.86
						Gross (A) 2:	87.8641			
						B)	87.6730	A-B=	0.1911	
24		R0904974-001	GY	100		Gross (A) 1:	85.7007	Gross (A) 3:		141.00
						Gross (A) 2:	85.7006			
						B)	85.6865	A-B=	0.0141	
25		MB	HH	100		Gross (A) 1:	81.6587	Gross (A) 3:		0.00
						Gross (A) 2:	81.6592			
						B)	81.6587	A-B=	0.0000	
26		LCS	L6	53		Gross (A) 1:	82.1956	Gross (A) 3:		879.25
						Gross (A) 2:	82.1953			
						B)	82.1487	A-B=	0.0466	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 9/4/09
Method: SM20 2540D Pipet: SUPERMAN/DISP Time: 10:50
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** X **TSS** ____
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92048E TV: **913** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
27		R0904982-001	62	32		Gross (A) 1:	90.1310	Gross (A) 3:		2343.75
						Gross (A) 2:	90.1308			
						B)	90.0558	A-B=	0.0750	
28		R0904982-001 DUP	XC	32		Gross (A) 1:	83.3040	Gross (A) 3:		2340.62
						Gross (A) 2:	83.3042			
						B)	83.2291	A-B=	0.0749	
29		R0905029-002	80	28		Gross (A) 1:	86.0583	Gross (A) 3:		4546.43
						Gross (A) 2:	86.0629			
						B)	85.9310	A-B=	0.1273	
30		R0905029-005	T5	100		Gross (A) 1:	82.5286	Gross (A) 3:		801.00
						Gross (A) 2:	82.5292			
						B)	82.4485	A-B=	0.0801	
31		R0905029-008	E1	100		Gross (A) 1:	82.0896	Gross (A) 3:		794.00
						Gross (A) 2:	82.0904			
						B)	82.0102	A-B=	0.0794	
32		R0905029-011	DW	32		Gross (A) 1:	84.2692	Gross (A) 3:		2881.25
						Gross (A) 2:	84.2692			
						B)	84.1770	A-B=	0.0922	
33		R0905004-001	F	57		Gross (A) 1:	83.7091	Gross (A) 3:		2043.86
						Gross (A) 2:	83.7094			
						B)	83.5926	A-B=	0.1165	
34		R0904817-001	CO	100		Gross (A) 1:	81.5249	Gross (A) 3:		207.00
						Gross (A) 2:	81.5244			
						B)	81.5037	A-B=	0.0207	
35		R0904817-002	13	100		Gross (A) 1:	80.8588	Gross (A) 3:		202.00
						Gross (A) 2:	80.8589			
						B)	80.8386	A-B=	0.0202	
36		RQ0908042-01	J1	100		Gross (A) 1:	84.3207	Gross (A) 3:		1.00
						Gross (A) 2:	84.3210			
						B)	84.3206	A-B=	0.0001	
37		RQ0908043-01	DF	100		Gross (A) 1:	78.2489	Gross (A) 3:		3.00
						Gross (A) 2:	78.2487			
						B)	78.2484	A-B=	0.0003	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC

Tare Weights:

Instrument: X Mettler AE240 Analytical Balance
____ Mettler AG204 Analytical Balance

Analyst: E. WOLFE
Date: 9/4/09

Drying Tins: ____ Dish 104°C: ____
Crucible 550°C: ____ Dish 550°C: ____
Dish 180°C: X G/O Dishes: ____

	Weight	Actual
s Weights (s):	99.9999 g	100 g
	____ g	____ g

ID Number	Weight	
ANT	82.7016	82.7014
CV	79.5021	79.5019
FT	86.1931	86.1928
30	86.8068	86.8067
WOW	80.8678	80.8679
FN	82.1484	82.1482
F4	83.6237	83.6236
VA	71.6456	71.6455
GY	85.6866	85.6865
UI	87.6733	87.6730
AZ	80.4090	80.4087
37	83.9569	83.9568
BB	82.1386	82.1384
50	84.7128	84.7126
DA	89.2244	89.2242
55	87.2056	87.2055
DF	78.2485	78.2484
13	80.8388	80.8386
J1	84.3207	84.3206

ID Number	Weight	
T1	82.4038	82.4035
LL	84.2180	84.2178
GA	80.2800	80.2797
A	85.1451	85.1449
IR	88.4009	88.4008
OX	89.3181	89.3180
47	83.3607	83.3606
A10	85.0427	85.0426
DW	84.1771	84.1770
T5	82.4487	82.4485
E1	82.0102	82.0102
62	90.0560	90.0558
HH	81.6588	81.6587
XC	83.2291	83.2292
L6	82.1487	82.1487
80	85.9312	85.9310
CO	81.5041	81.5037
F	83.5927	83.5926

9/8/09 EW

Columbia Analytical Services
1 Mustard St., Rochester, NY 14609-0859

General Chemistry Analytical Run Cover Sheet

Analyst: EW Date: 9/4/09

Analysis: Total Dissolved Solids Instrument: X Mettler AE 240 Analytical Balance
_____ Mettler AG 204 Analytical Balance

Quality Control:

	Log Book #	Log Book Date	Stock Sol (m/Ls)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:						
b) I/CCV Preparation:						
c) LCS Preparation:	WC92048E	7/24/2009				913
d) Matrix Spike Prep.:						

Instrument log filled in? (Y) (N)

Packages: Copy and attach LCS Preparation

Comments:

The weight loss between successive gross dry weights should not exceed 4% or 1.0 mg, whichever is less.

For calculations, used: ✓ lower ____ higher tare weight

As a rule, the lower of the successive dry weights is used to calculate the result.

p:\lotus\123r22\greg\forms\cover.tss

Continued from page

7/24/09 GN (A) Sulfide Reference
To a tared amber jar add approx. 0.4 g $Na_2S \cdot 9H_2O$ (WC76230B) and dilute to 100 g w/ DI. Mix until dissolved. Store at 4°C for 2 weeks. Exp 8/7/09

7/24/09 NM (B) 0.00564N Sodium Thiosulfate - Chlorine Demand
Dilute 28.2 mL of 0.1 N $Na_2S_2O_3$ (WC92020E) to 500 mL in 500 mL vol. flask with DI Expires 2 week 8/7/09.

(C) Standard KIO_3 Titrant - Chlorine Demand
- Same as WC92028B. Prepare fresh each run.

(D) Stock Chlorine Solution - Chlorine Demand
- same as WC92028A. Prepare fresh each run and standardize with use.

7/24/09 EW (E) TDS Reference
0.9132 g NaCl (WC85215H) diluted volumetrically to 1 Liter w/ DI. Store in plastic bottle @ 4°C.
TV = 913 mg/L Exp: 7/24/10 (11089)

7/24/09 Exp (F) 0.00564N $Na_2S_2O_3$
Same as WC92045B. Made fresh per run

(G) Stock Chlorine - Cl Residual
Same as WC92044E. Made fresh and standardized per run.

7/24/09 GN (H) 1:1 H_2SO_4 - cN Distillation
- Same as WC92027E. Exp 7/24/10

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

Analytical Results Summary

A

Instrument Name: R-Balance-02 **Analyst:** EWOLFE **Analysis Lot:** 169154 **Method/Testcode:** SM 2540 D/TSS SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908258-01	Solids, Total Suspended (TSS)	MB		Soil	-0.20 mg/L	1000 mL	1.0 mg/L U ✓	1	1.0			9/4/09 11:40	N	IV
RQ0908258-02	Solids, Total Suspended (TSS)	LCS		Soil	216.00 mg/L	100 mL	216 mg/L ✓	1	1.0	101		9/4/09 11:40	N	IV
R0904817-001	Solids, Total Suspended (TSS)	N/A		Soil	1.10 mg/L	1000 mL	1.1 mg/L ✓	1	1.0			9/4/09 11:40	N	IV
R0904817-002	Solids, Total Suspended (TSS)	N/A		Soil	13.15 mg/L	730 mL	13.2 mg/L ✓	1	1.0			9/4/09 11:40	N	IV
RQ0908042-01	Solids, Total Suspended (TSS)	MB		Soil	-0.10 mg/L	1000 mL	1.0 mg/L U ✓	1	1.0			9/4/09 11:40	N	IV
RQ0908043-01	Solids, Total Suspended (TSS)	MB		Soil	-0.20 mg/L	1000 mL	1.0 mg/L U ✓	1	1.0			9/4/09 11:40	N	IV

Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:32

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS)
Method: SM20 2540D
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C
Analyte: Total Solids (TS)
Method SM20 2540B

Analyst: E. WOLFE
Pipet: NA
Date: 9/4/09
Time: 11:40

TS ____ **TDS** ____ **TSS** X

LCS Lot: WC92057B TV: **214** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
1		MB	69	1000		Gross (A) 1:	1.3921	Gross (A) 3:		-0.20
						Gross (A) 2:	1.3922			
						B)	1.3923	A-B=	-0.0002	
2		LCS	70	100		Gross (A) 1:	1.4242	Gross (A) 3:		216.00
						Gross (A) 2:	1.4244			
						B)	1.4026	A-B=	0.0216	
3		R0904944-001	71	355		Gross (A) 1:	1.4076	Gross (A) 3:		28.17
						Gross (A) 2:	1.4076			
						B)	1.3976	A-B=	0.0100	
4		R0904944-001 DUP	72	355		Gross (A) 1:	1.4050	Gross (A) 3:		28.17
						Gross (A) 2:	1.4050			
						B)	1.3950	A-B=	0.0100	
5		R0904941-001	73	1000		Gross (A) 1:	1.3983	Gross (A) 3:		1.50
						Gross (A) 2:	1.3984			
						B)	1.3968	A-B=	0.0015	
6		R0904945-001	74	960	X	Gross (A) 1:	1.3970	Gross (A) 3:		3.13
						Gross (A) 2:	1.3971			
						B)	1.3940	A-B=	0.0030	
7		R0904932-001	75	990	X	Gross (A) 1:	1.4004	Gross (A) 3:		2.53
						Gross (A) 2:	1.4006			
						B)	1.3979	A-B=	0.0025	
8		R0904933-001	76	850		Gross (A) 1:	1.4040	Gross (A) 3:		6.94
						Gross (A) 2:	1.4042			
						B)	1.3981	A-B=	0.0059	
9		R0904942-002	77	80		Gross (A) 1:	1.4028	Gross (A) 3:		63.75
						Gross (A) 2:	1.4029			
						B)	1.3977	A-B=	0.0051	
10		R0904942-002 DUP	78	80		Gross (A) 1:	1.4038	Gross (A) 3:		80.00
						Gross (A) 2:	1.4040			
						B)	1.3974	A-B=	0.0064	
11		R0904943-001	79	1000		Gross (A) 1:	1.3939	Gross (A) 3:		-0.10
						Gross (A) 2:	1.3940			
						B)	1.3940	A-B=	-0.0001	
12		R0904947-001	80	680		Gross (A) 1:	1.4114	Gross (A) 3:		15.44
						Gross (A) 2:	1.4116			
						B)	1.4009	A-B=	0.0105	
13		R0904947-005	81	955	X	Gross (A) 1:	1.4047	Gross (A) 3:		7.12
						Gross (A) 2:	1.4047			
						B)	1.3979	A-B=	0.0068	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

00657

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 9/4/09
Method: SM20 2540D Pipet: NA Time: 11:40
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** ____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92057B TV: **214** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
14		R0904947-009	82	645		Gross (A) 1:	1.3989	Gross (A) 3:		5.58
						Gross (A) 2:	1.3989			
						B)	1.3953	A-B=	0.0036	
15		R0904947-013	83	775		Gross (A) 1:	1.4045	Gross (A) 3:		13.42
						Gross (A) 2:	1.4045			
						B)	1.3941	A-B=	0.0104	
16		R0904987-001	84	685		Gross (A) 1:	1.4093	Gross (A) 3:		9.20
						Gross (A) 2:	1.4094			
						B)	1.4030	A-B=	0.0063	
17		R0904950-002	85	370		Gross (A) 1:	1.4045	Gross (A) 3:		15.41
						Gross (A) 2:	1.4047			
						B)	1.3988	A-B=	0.0057	
18		R0904960-001	86	9.9		Gross (A) 1:	1.4087	Gross (A) 3:		1010.10
						Gross (A) 2:	1.4089			
						B)	1.3987	A-B=	0.0100	
19		R0904960-002	87	230		Gross (A) 1:	1.4014	Gross (A) 3:		16.96
						Gross (A) 2:	1.4015			
						B)	1.3975	A-B=	0.0039	
20		R0904960-003	88	1.1		Gross (A) 1:	1.4173	Gross (A) 3:		9090.91
						Gross (A) 2:	1.4173			
						B)	1.4073	A-B=	0.0100	
21		R0904960-004	89	1000		Gross (A) 1:	1.4036	Gross (A) 3:		3.50
						Gross (A) 2:	1.4036			
						B)	1.4001	A-B=	0.0035	
22		R0904961-009	90	10		Gross (A) 1:	1.4226	Gross (A) 3:		1690.00
						Gross (A) 2:	1.4226			
						B)	1.4057	A-B=	0.0169	
23		R0904961-010	91	3.6		Gross (A) 1:	1.4122	Gross (A) 3:		3444.44
						Gross (A) 2:	1.4123			
						B)	1.3998	A-B=	0.0124	
24		R0904961-011	92	3.2		Gross (A) 1:	1.4113	Gross (A) 3:		5093.75
						Gross (A) 2:	1.4115			
						B)	1.3950	A-B=	0.0163	
25		MB	93	1000		Gross (A) 1:	1.4022	Gross (A) 3:		-0.20
						Gross (A) 2:	1.4023			
						B)	1.4024	A-B=	-0.0002	
26		LCS	94	100		Gross (A) 1:	1.4224	Gross (A) 3:		216.00
						Gross (A) 2:	1.4224			
						B)	1.4008	A-B=	0.0216	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 9/4/09
Method: SM20 2540D Pipet: NA Time: 11:40
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** ____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92057B TV: **214** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
27		R0904967-003	95	1000		Gross (A) 1:	1.4045	Gross (A) 3:		0.40
						Gross (A) 2:	1.4045			
						B)	1.4041	A-B=	0.0004	
28		R0904978-001	96	620		Gross (A) 1:	1.4146	Gross (A) 3:		17.58
						Gross (A) 2:	1.4146			
						B)	1.4037	A-B=	0.0109	
29		R0904984-002	97	1000		Gross (A) 1:	1.4061	Gross (A) 3:		0.80
						Gross (A) 2:	1.4062			
						B)	1.4053	A-B=	0.0008	
30		R0904993-001	98	500	X	Gross (A) 1:	1.4050	Gross (A) 3:		0.20
						Gross (A) 2:	1.4051			
						B)	1.4049	A-B=	0.0001	
31		R0905004-001	99	465		Gross (A) 1:	1.4123	Gross (A) 3:		10.11
						Gross (A) 2:	1.4124			
						B)	1.4076	A-B=	0.0047	
32		R0905006-001	1	965	X	Gross (A) 1:	1.4168	Gross (A) 3:		10.98
						Gross (A) 2:	1.4169			
						B)	1.4062	A-B=	0.0106	
33		R0905006-005	2	380		Gross (A) 1:	1.4106	Gross (A) 3:		19.74
						Gross (A) 2:	1.4107			
						B)	1.4031	A-B=	0.0075	
34		R0905006-009	3	1000		Gross (A) 1:	1.4059	Gross (A) 3:		6.30
						Gross (A) 2:	1.4060			
						B)	1.3996	A-B=	0.0063	
35		R0905006-013	4	995	X	Gross (A) 1:	1.4053	Gross (A) 3:		6.83
						Gross (A) 2:	1.4052			
						B)	1.3984	A-B=	0.0068	
36		R0905006-013 DUP	5	1000		Gross (A) 1:	1.4117	Gross (A) 3:		7.00
						Gross (A) 2:	1.4117			
						B)	1.4047	A-B=	0.0070	
37		R0905040-001	6	1000		Gross (A) 1:	1.3982	Gross (A) 3:		1.30
						Gross (A) 2:	1.3983			
						B)	1.3969	A-B=	0.0013	
38		R0905040-002	7	330		Gross (A) 1:	1.4018	Gross (A) 3:		11.82
						Gross (A) 2:	1.4019			
						B)	1.3979	A-B=	0.0039	
39		R0905040-003	8	1000		Gross (A) 1:	1.4091	Gross (A) 3:		6.80
						Gross (A) 2:	1.4090			
						B)	1.4022	A-B=	0.0068	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 9/4/09
Method: SM20 2540D Pipet: NA Time: 11:40
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** ____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92057B TV: **214** Balance ID: **AE240**
Filter Lot: **WC92065H** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
40		R0905044-001	9	180		Gross (A) 1:	1.3836	Gross (A) 3:		35.56
						Gross (A) 2:	1.3836			
						B)	1.3772	A-B=	0.0064	
41		R0905044-003	10	40.8		Gross (A) 1:	1.4000	Gross (A) 3:		183.82
						Gross (A) 2:	1.4001			
						B)	1.3925	A-B=	0.0075	
42		R0905044-003 DUP	11	42		Gross (A) 1:	1.4151	Gross (A) 3:		188.10
						Gross (A) 2:	1.4152			
						B)	1.4072	A-B=	0.0079	
43		R0905044-004	12	71		Gross (A) 1:	1.4079	Gross (A) 3:		47.89
						Gross (A) 2:	1.4077			
						B)	1.4043	A-B=	0.0034	
44		R0905044-006	13	1000		Gross (A) 1:	1.4020	Gross (A) 3:		1.20
						Gross (A) 2:	1.4021			
						B)	1.4008	A-B=	0.0012	
45		R0904817-001	14	1000		Gross (A) 1:	1.4017	Gross (A) 3:		1.10
						Gross (A) 2:	1.4017			
						B)	1.4006	A-B=	0.0011	
46		R0904817-002	15	730		Gross (A) 1:	1.4002	Gross (A) 3:		13.15
						Gross (A) 2:	1.4003			
						B)	1.3906	A-B=	0.0096	
47		RQ0908043-01	16	1000		Gross (A) 1:	1.4011	Gross (A) 3:		-0.20
						Gross (A) 2:	1.4012			
						B)	1.4013	A-B=	-0.0002	
48		RQ0908042-01	17	1000		Gross (A) 1:	1.3879	Gross (A) 3:		-0.10
						Gross (A) 2:	1.3881			
						B)	1.3880	A-B=	-0.0001	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC

Tare Weights:

Instrument: X Mettler AE240 Analytical Balance
____ Mettler AG204 Analytical Balance

Analyst: E. WOLFE
Date: 9/4/09

Drying Tins: X
Crucible 550°C: ____
Dish 180°C: ____
Dish 104°C: ____
Dish 550°C: ____
G/O Dishes: ____

	Weight	**Actual**
s Weights (s):	0.9999 g	1 g
	____ g	____ g

ID Number	Weight	
69	1.3923	1.3923
70	1.4026	1.4026
71	1.3976	1.3976
72	1.3950	1.3950
73	1.3968	1.3968
74	1.3940	1.3940
75	1.3979	1.3980
76	1.3981	1.3981
77	1.3977	1.3978
78	1.3974	1.3974
79	1.3940	1.3941
80	1.4009	1.4009
81	1.3979	1.3980
82	1.3954	1.3953
83	1.3941	1.3942
84	1.4030	1.4030
85	1.3988	1.3989
86	1.3987	1.3988
87	1.3975	1.3976
88	1.4073	1.4073
89	1.4001	1.4001
90	1.4057	1.4058
91	1.3998	1.3998
92	1.3950	1.3950

ID Number	Weight	
93	1.4024	1.4024
94	1.4008	1.4008
95	1.4041	1.4041
96	1.4037	1.4037
97	1.4054	1.4053
98	1.4049	1.4049
99	1.4076	1.4076
1	1.4062	1.4062
2	1.4031	1.4031
3	1.3997	1.3996
4	1.3984	1.3984
5	1.4047	1.4047
6	1.3969	1.3969
7	1.3979	1.3980
8	1.4022	1.4022
9	1.3773	1.3772
10	1.3925	1.3925
11	1.4073	1.4072
12	1.4043	1.4043
13	1.4008	1.4008
14	1.4006	1.4007
15	1.3906	1.3906
16	1.4013	1.4013
17	1.3880	1.3881

Columbia Analytical Services
1 Mustard St., Rochester, NY 14609-0859

General Chemistry Analytical Run Cover Sheet

Analyst: EW Date: 9/4/09

Analysis: Total Suspended Solids Instrument: ✓ Mettler AE 240 Analytical Balance
_____ Mettler AG 204 Analytical Balance

Quality Control:

	Log Book #	Log Book Date	Stock Sol (m/Ls)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:						
b) I/CCV Preparation:						
c) LCS Preparation:	WC92057B	8/6/2009				214
d) Matrix Spike Prep.:						

Instrument log filled in? (Y) (N)

Packages: Copy and attach LCS Preparation

Comments:

The difference between successive gross dry weights should be less than 4% of the previous weight or 0.5 mg, whichever is less.

As a rule, both the lower tare weight and the lower of the successive dry weights are used for calculation.

p:\lotus\123r22\greg\forms\cover.tss

TITLE PROJECT

Continued from page

8/6/09 NM (A) Color Reagent - NH_3
- same as WC92005A. Exp. 8/6/10

8/6/09 EW (B) TSS Reference
0.2136 g Kaolin (WC69285G) brought to 1000 g w/ DI. Store in plastic bottle @ 4°C.
TV = 214 mg/L Exp: 6/2/10 ((11318)

8/7/09 NM (C) 0.8 M NaOH - TKN
- same as WC92007C. Exp. 1 month, 9/7/09.

(D) Post-Digestion Matrix Match - TKN
To a 2-L vol. flask add 800 mL TKN Digest Reagent (WC92055H) and bring to volume w/ UPDI, mix thoroughly. Pour off 100 mLs and discard. Bring back to volume w/ UPDI, mix thoroughly. Store @ RT in amber glass. Exp. 9/5/09.

(E) Hypochlorite - TKN
- same as WC92051E. Prepare fresh each run.

8/7/09 SBR (F) TKN Digest Reagent
To a 2 L vol. flask, add 268g K_2SO_4 (WC92053G) and 14.6g $CuSO_4$ (WC85271E). Fill over half way with UPDI. Slowly add 268 mL omnitrace H_2SO_4 (M1780089K). Allow to dissolve and cool. Bring to volume with UPDI. Store @ RT in amber glass for 1 month. Exp 9/7/09.

(G) TKN Digest Reagent
Same as WC92051F Exp 9/7/09

8/7/09 DPW (H) MBAS Wash Solution
To a tared 2L vol. flask add: 100g sodium phosphate monobasic monohydrate (WC92035H), 13.7 mL conc. H_2SO_4 (WC92040B). ~~St~~ DPW 8/7/09 Bring to volume w/ DI, store @ RT. Prepared 8/6/09, exp: 8/6/2010.

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

Analytical Results Summary

Instrument Name: R-IC-07 **Analyst:** CWOODS **Analysis Lot:** 168687 **Method/Testcode:** 9056/Br SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0908120-01	Bromide	MB		Soil	0.00 mg/L		0.10 mg/L U	1	0.10			9/1/09 10:34:14	N	IV
RQ0908120-01	Chloride	MB		Soil	0.15 mg/L		0.15 mg/L J	1	0.20			9/1/09 10:34:14	N	IV
RQ0908120-01	Nitrate as Nitrogen, SPLP	MB		Soil	0.00 mg/L		0.050 mg/L U	1	0.050			9/1/09 10:34:14	N	IV
RQ0908120-01	Sulfate, SPLP	MB		Soil	0.00 mg/L		0.20 mg/L U	1	0.20			9/1/09 10:34:14	N	IV
RQ0908120-02	Bromide	LCS		Soil	1.01 mg/L		1.01 mg/L	1	0.10	101		9/1/09 10:50:30	N	IV
RQ0908120-02	Chloride	LCS		Soil	1.80 mg/L		1.80 mg/L	1	0.20	90		9/1/09 10:50:30	N	IV
RQ0908120-02	Nitrate as Nitrogen, SPLP	LCS		Soil	0.98 mg/L		0.978 mg/L	1	0.050	98		9/1/09 10:50:30	N	IV
RQ0908120-02	Sulfate, SPLP	LCS		Soil	2.03 mg/L		2.03 mg/L	1	0.20	101		9/1/09 10:50:30	N	IV
RQ0908059-01	Bromide	MB		Soil	0.00 mg/L	1 g	10 mg/Kg U	1	10			9/1/09 11:51:40	N	I
RQ0908059-01	Chloride	MB		Soil	0.15 mg/L	1 g	15 mg/Kg J	1	30			9/1/09 11:51:40	N	I
RQ0908059-01	Fluoride	MB		Soil	0.00 mg/L	1 g	20 mg/Kg U	1	20			9/1/09 11:51:40	N	I
RQ0908059-01	Sulfate	MB		Soil	0.00 mg/L	1 g	20 mg/Kg U	1	20			9/1/09 11:51:40	N	I
RQ0908060-01	Nitrate as Nitrogen	MB		Soil	0.00 mg/L	1 g	5.0 mg/Kg U	1	5.0			9/1/09 11:51:40	N	I
RQ0908059-02	Bromide	LCS		Soil	1.00 mg/L	1 g	100 mg/Kg	1	10	100		9/1/09 12:07:59	N	I
RQ0908059-02	Chloride	LCS		Soil	1.88 mg/L	1 g	188 mg/Kg	1	30	94		9/1/09 12:07:59	N	I
RQ0908059-02	Fluoride	LCS		Soil	0.94 mg/L	1 g	94 mg/Kg	1	20	94		9/1/09 12:07:59	N	I
RQ0908059-02	Sulfate	LCS		Soil	2.05 mg/L	1 g	205 mg/Kg	1	20	102		9/1/09 12:07:59	N	I
RQ0908060-02	Nitrate as Nitrogen	LCS		Soil	0.98 mg/L	1 g	97.9 mg/Kg	1	5.0	98		9/1/09 12:07:59	N	I
R0904223-019	Chloride	N/A		Soil	43.83 mg/L		43.8 mg/L	10	2.0			9/1/09 15:23:28	N	IV
R0904817-001	Bromide	N/A		Soil	0.00 mg/L		0.10 mg/L U	1	0.10			9/1/09 15:56:05	N	IV
R0904817-001	Chloride	N/A		Soil	4.59 mg/L		4.59 mg/L	1	0.20			9/1/09 15:56:05	N	IV
R0904817-001	Nitrate as Nitrogen, SPLP	N/A		Soil	1.15 mg/L		1.15 mg/L	1	0.050			9/1/09 15:56:05	N	IV
RQ0908120-03	Bromide	DUP	R0904817-001	Soil	0.00 mg/L		0.10 mg/L U	1	0.10		NC	9/1/09 16:12:22	N	IV
RQ0908120-03	Chloride	DUP	R0904817-001	Soil	4.58 mg/L		4.58 mg/L	1	0.20		<1	9/1/09 16:12:22	N	IV
RQ0908120-03	Nitrate as Nitrogen, SPLP	DUP	R0904817-001	Soil	1.14 mg/L		1.14 mg/L	1	0.050		1	9/1/09 16:12:22	N	IV
RQ0908120-04	Bromide	MS	R0904817-001	Soil	0.96 mg/L		0.962 mg/L	1	0.10	96		9/1/09 16:28:40	N	IV
RQ0908120-04	Chloride	MS	R0904817-001	Soil	6.64 mg/L		6.64 mg/L	1	0.20	102		9/1/09 16:28:40	N	IV
RQ0908120-04	Nitrate as Nitrogen, SPLP	MS	R0904817-001	Soil	2.11 mg/L		2.11 mg/L	1	0.050	96		9/1/09 16:28:40	N	IV
RQ0908043-01	Bromide	MB		Soil	0.00 mg/L		0.10 mg/L U	1	0.10			9/1/09 16:44:57	N	IV
RQ0908043-01	Chloride	MB		Soil	0.16 mg/L		0.16 mg/L J	1	0.20			9/1/09 16:44:57	N	IV
RQ0908043-01	Nitrate as Nitrogen, SPLP	MB		Soil	0.09 mg/L		0.089 mg/L	1	0.050			9/1/09 16:44:57	N	IV
RQ0908043-01	Sulfate, SPLP	MB		Soil	0.00 mg/L		0.20 mg/L U	1	0.20			9/1/09 16:44:57	N	IV
R0904817-002	Bromide	N/A		Soil	0.00 mg/L		0.10 mg/L U	1	0.10			9/1/09 17:01:16	N	IV
R0904817-002	Chloride	N/A		Soil	4.46 mg/L		4.46 mg/L	1	0.20			9/1/09 17:01:16	N	IV
R0904817-002	Nitrate as Nitrogen, SPLP	N/A		Soil	1.05 mg/L		1.05 mg/L	1	0.050			9/1/09 17:01:16	N	IV
RQ0908042-01	Bromide	MB		Soil	0.00 mg/L		0.10 mg/L U	1	0.10			9/1/09 20:00:34	N	IV
RQ0908042-01	Chloride	MB		Soil	0.16 mg/L		0.16 mg/L J	1	0.20			9/1/09 20:00:34	N	IV
RQ0908042-01	Nitrate as Nitrogen, SPLP	MB		Soil	0.15 mg/L		0.146 mg/L	1	0.050			9/1/09 20:00:34	N	IV
RQ0908042-01	Sulfate, SPLP	MB		Soil	0.86 mg/L		0.86 mg/L	1	0.20			9/1/09 20:00:34	N	IV
R0904817-001	Sulfate, SPLP	N/A		Soil	12.66 mg/L		12.7 mg/L	2	0.40			9/1/09 21:05:43	N	IV

Analytical Results Summary

Instrument Name: R-IC-07 **Analyst:** CWOODS **Analysis Lot:** 168687 **Method/Testcode:** 9056 Modified/SO4 SPLP

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
R0904817-002	Sulfate, SPLP	N/A		Soil	12.54 mg/L		12.5 mg/L	2	0.40			9/1/09 21:54:35	N	IV

Schedule File: J:\ACQUDATA\IC\SCHEDULE\IC#7\090109.#7.SCH 09-01-09 IC#7

Line	Sample	Sample Type	Level	Method	Data File	Dilution	Comment
1	CCV	Sample		500-081409.met	901_001.dxd	1	
2	CCB	Sample		500-081409.met	901_002.dxd	1	
3	LCS	Sample		500-081409.met	901_003.dxd	1	
4	PB SOIL	Sample		500-081409.met	901_004.dxd	1	
5	LCS SOIL	Sample		500-081409.met	901_005.dxd	1	
6	R0904089-013	Sample		500-081409.met	901_006.dxd	1	CBNNSF
7	R0904089-013 DUP	Sample		500-081409.met	901_007.dxd	1	CBNNSF
8	R0904089-013 SPK	Sample		500-081409.met	901_008.dxd	1	CBNNSF
9	R0904406-001	Sample		500-081409.met	901_009.dxd	1	C
10	R0904406-001 DUP	Sample		500-081409.met	901_010.dxd	1	C
11	R0904406-001 SPK	Sample		500-081409.met	901_011.dxd	1	C
12	CCV	Sample		500-081409.met	901_012.dxd	1	
13	CCB ↑ CI Soil	Sample		500-081409.met	901_013.dxd	1	
14	R0904089-013	Sample		500-081409.met	901_014.dxd	2	C
15	R0904089-013 DUP	Sample		500-081409.met	901_015.dxd	2	C
16	R0904089-013 SPK	Sample		500-081409.met	901_016.dxd	2	C
17	R0904223-019	Sample		500-081409.met	901_017.dxd	10	C (SPLP)
18	MB 8042-01	Sample		500-081409.met	901_018.dxd	1	
19	R0904817-001	Sample		500-081409.met	901_019.dxd	1	CBNS (SPLP)
20	R0904817-001 DUP @ IC	Sample		500-081409.met	901_020.dxd	1	CBNS (SPLP)
21	R0904817-001 SPK @ IC	Sample		500-081409.met	901_021.dxd	1	CBNS (SPLP)
22	MB 8043-01	Sample		500-081409.met	901_022.dxd	1	CBNS (SPLP)
23	R0904817-002	Sample		500-081409.met	901_023.dxd	1	CBNS (SPLP)
24	CCV	Sample		500-081409.met	901_024.dxd	1	
25	CCB	Sample		500-081409.met	901_025.dxd	1	
26	LCS	Sample		500-081409.met	901_026.dxd	1	
27	R0904089-013	Sample		500-081409.met	901_027.dxd	1	S (SOIL)
28	R0904089-013 DUP	Sample		500-081409.met	901_028.dxd	1	S (SOIL)
29	R0904089-013 SPK	Sample		500-081409.met	901_029.dxd	1	S (SOIL)
30	R0904089-013	Sample		500-081409.met	901_030.dxd	1	C (SOIL)
31	R0904089-013 DUP	Sample		500-081409.met	901_031.dxd	1	C (SOIL)
32	R0904089-013 SPK	Sample		500-081409.met	901_032.dxd	1	C (SOIL)
33	R0904223-019	Sample		500-081409.met	901_033.dxd	10	C (SPLP)
34	MB 8042-01	Sample		500-081409.met	901_034.dxd	1	
35	R0904817-001	Sample		500-081409.met	901_035.dxd	1	C (SPLP)
36	CCV	Sample		500-081409.met	901_036.dxd	1	
37	CCB	Sample		500-081409.met	901_037.dxd	1	
38	R0904817-001	Sample		500-081409.met	901_038.dxd	2	S (SPLP)
39	MB 8043-01	Sample		500-081409.met	901_039.dxd	1	
40	R0904817-002	Sample		500-081409.met	901_040.dxd	1	C (SPLP)
41	R0904817-002	Sample		500-081409.met	901_041.dxd	2	S (SPLP)
42	CCV	Sample		500-081409.met	901_042.dxd	1	
43	CCB ↑ CI	Sample		500-081409.met	901_043.dxd	1	
44	LCS	Sample		500-081409.met	901_044.dxd	1	
45	R0904406-001	Sample		500-081409.met	901_045.dxd	1	C
46	CCV	Sample		500-081409.met	901_046.dxd	1	
47	CCB	Sample		500-081409.met	901_047.dxd	1	
48	END	Sample		j:\acqudata\ic\method.aci\ic#7\shutdown.met	901	1	

Analysts: R. Paul
C. Woods

Projects: Mine
Lucy

R4223
R4817
2 copies

Default Method Path: J:\ACQUDATA\IC\METHOD.ACI\IC#7\DI METHODS
Default Data Path: J:\ACQUDATA\IC\DATA\IC#7\090109
Comment:

Reviewed & Approved
By: CK
Date: 9/3/09

5555

Prep Run#: 95033
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Preparation Information Benchsheet

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: DB Date: 9/1/09

Received By: Martin Cary Date: 9/1/09 1305

Extracts Examined
Yes No

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_001.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:17:57 AM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

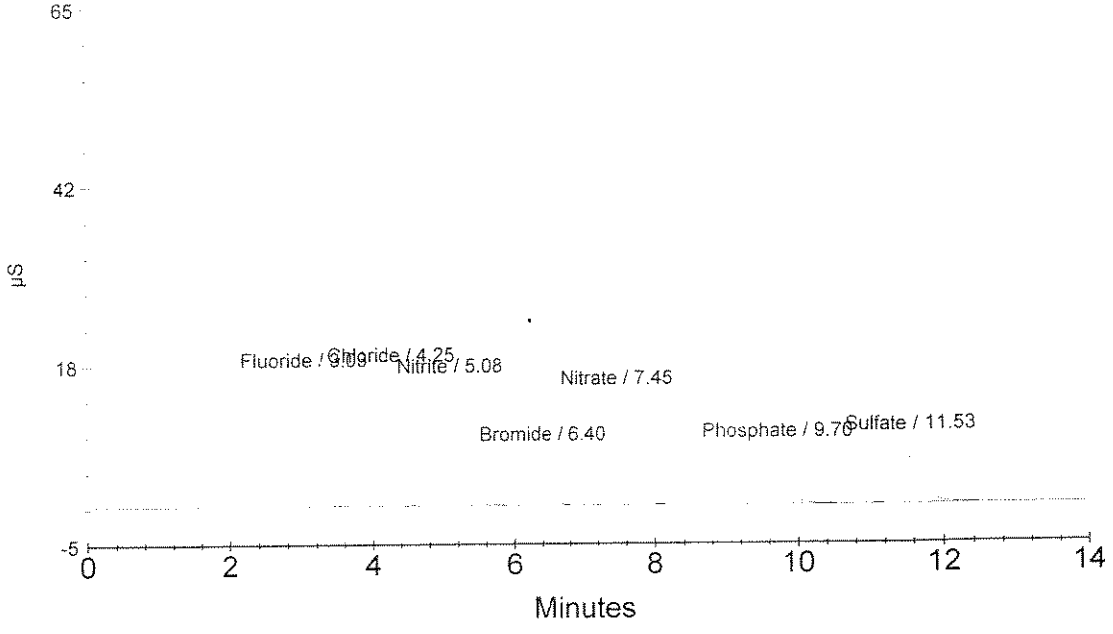
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.03	Fluoride	1.877	1007944
2	4.25	Chloride	2.931	1167360
3	5.08	Nitrite	1.745	1328442
4	6.40	Bromide	2.031	289537
5	7.45	Nitrate	1.732	1595151
6	9.70	Phosphate	1.781	543852
7	11.53	Sulfate	3.128	801293

9/2/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_002.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:34:14 AM

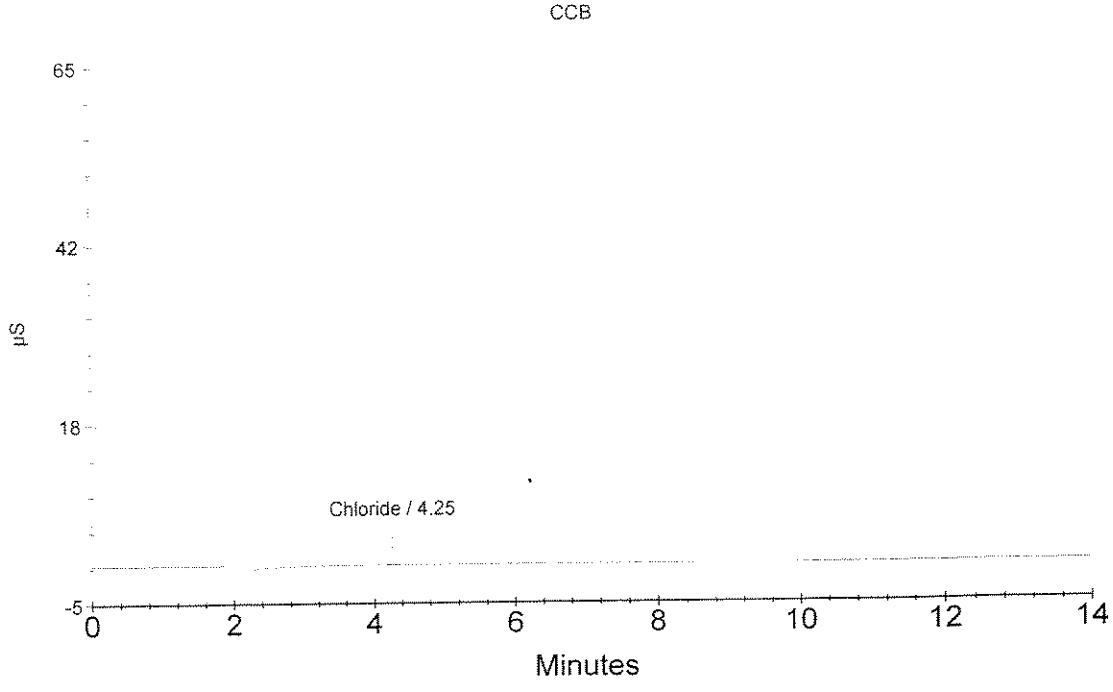
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.25	Chloride	OK	0.151	7641



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\901_003.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:50:30 AM

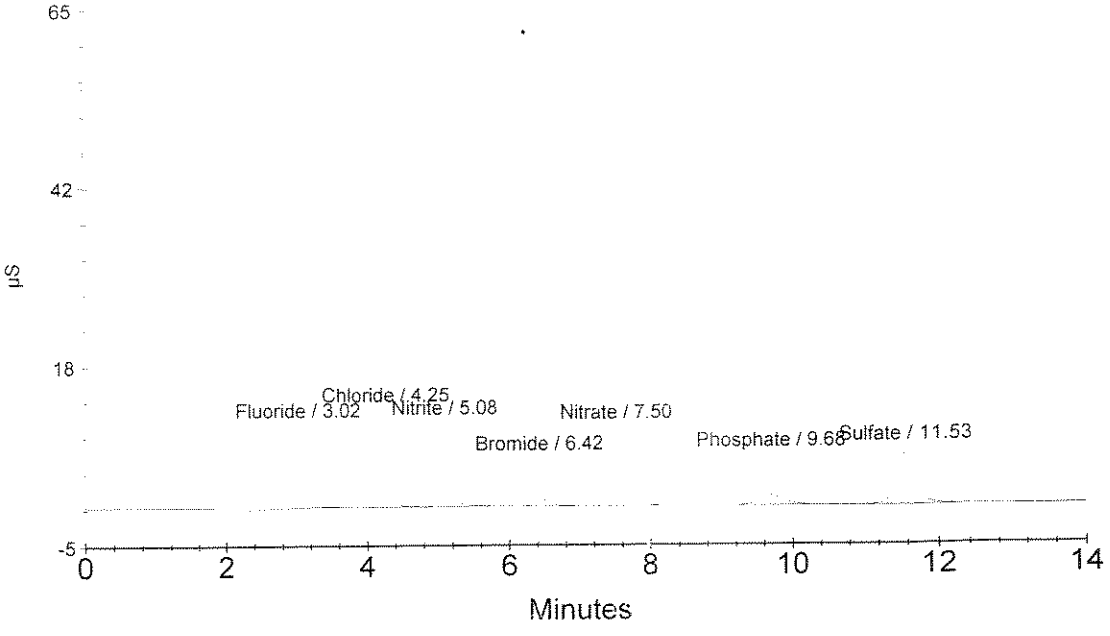
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.928	479049
2	4.25	Chloride	1.804	697423
3	5.08	Nitrite	0.949	700596
4	6.42	Bromide	1.010	140610
5	7.50	Nitrate	0.978	865138
6	9.68	Phosphate	1.002	298607
7	11.53	Sulfate	2.030	513546



00671

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : PB SOIL
Data File Name : ...\901_004.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 11:51:40 AM

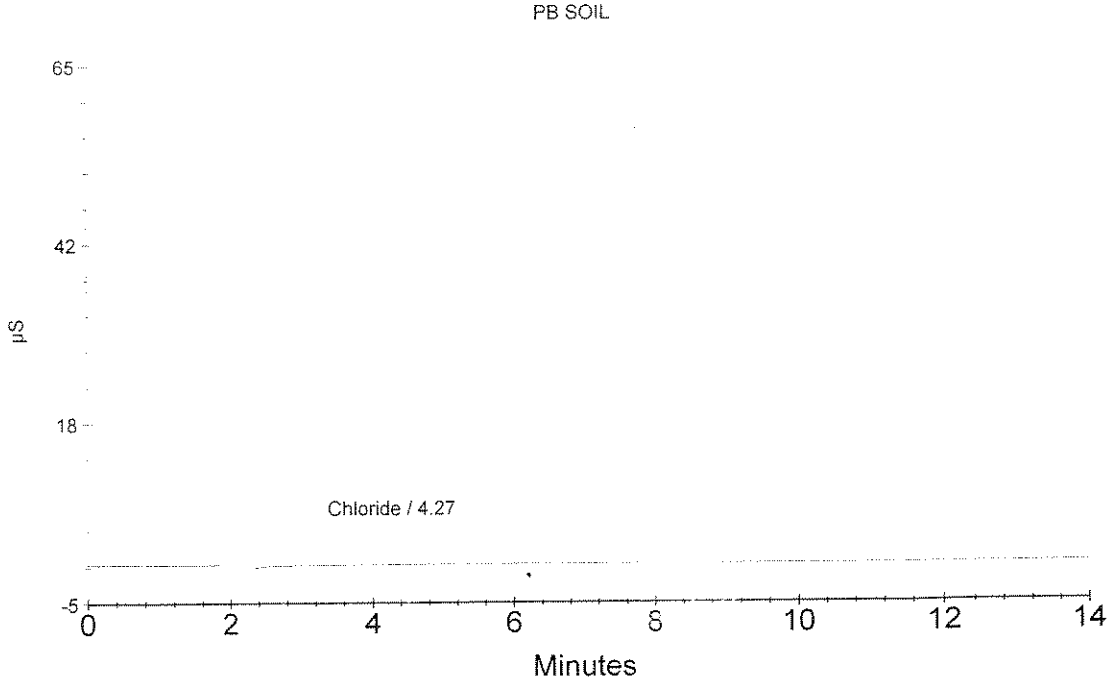
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	4.27	Chloride	0.147	6110



00672

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS SOIL
Data File Name : ...\901_005.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 12:07:59 PM

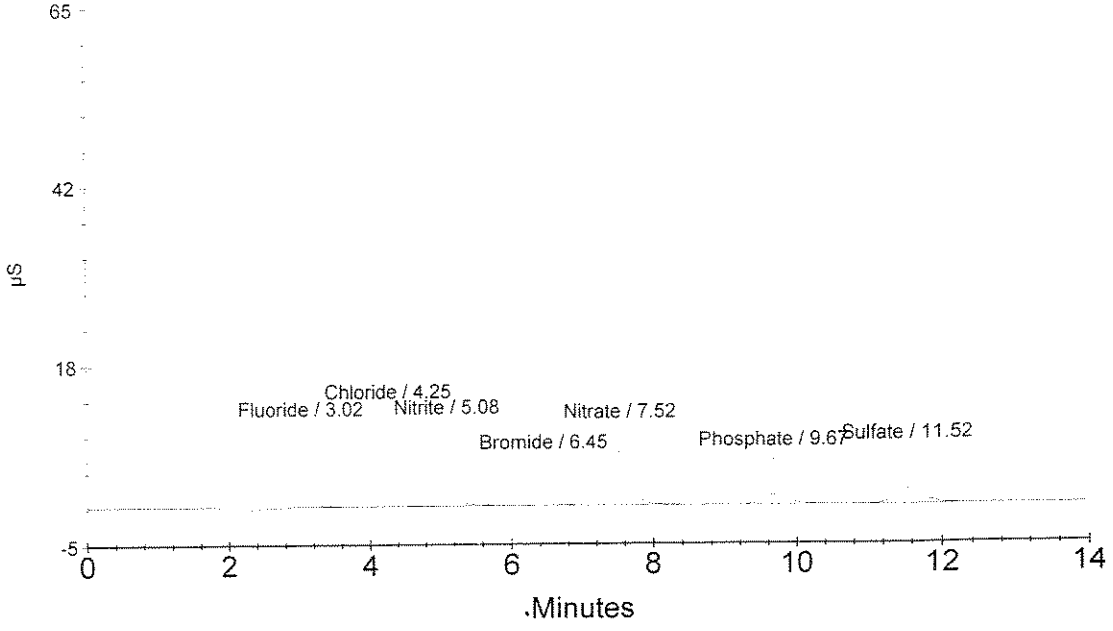
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.936	483436
2	4.25	Chloride	1.879	728675
3	5.08	Nitrite	0.952	703219
4	6.45	Bromide	1.004	139786
5	7.52	Nitrate	0.979	866012
6	9.67	Phosphate	1.003	298862
7	11.52	Sulfate	2.048	518078



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013
Data File Name : ...\901_006.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 12:24:16 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNNSF

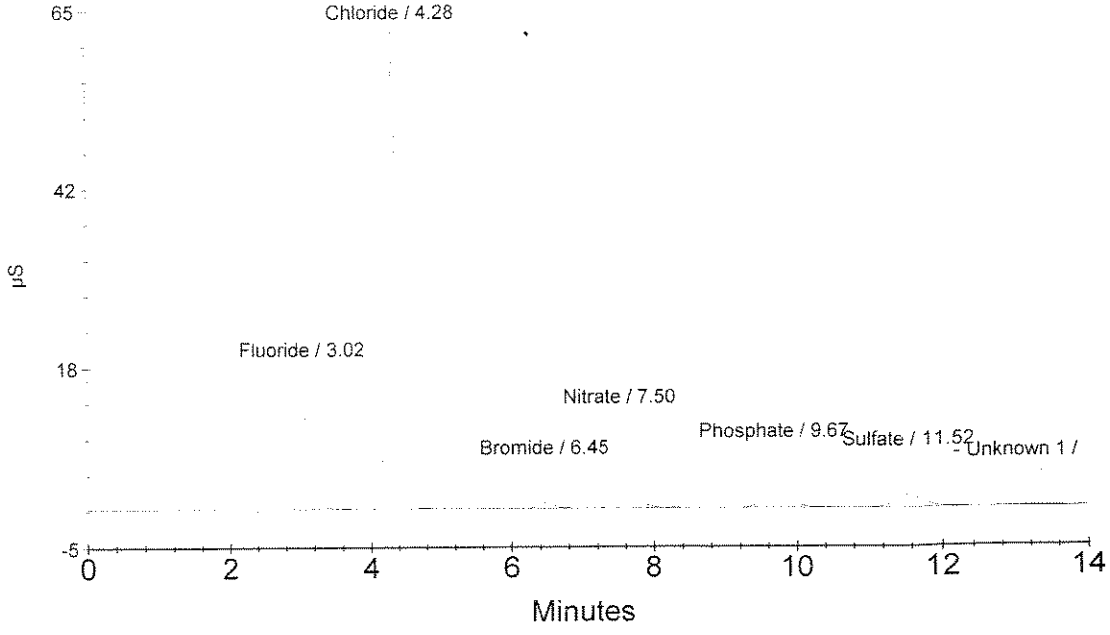
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride ok	2.203	1189441
2	4.28	Chloride 1/2	13.083	5401963
3	6.45	Bromide ok	0.724	98941
4	7.50	Nitrate ok	1.389	1262655
5	9.67	Phosphate	2.132	654330
6	11.52	Sulfate Rpt str	1.680	421664

NO_2 ok
9/2/09

R0904089-013



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 DUP
Data File Name : ...\901_007.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 12:40:33 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

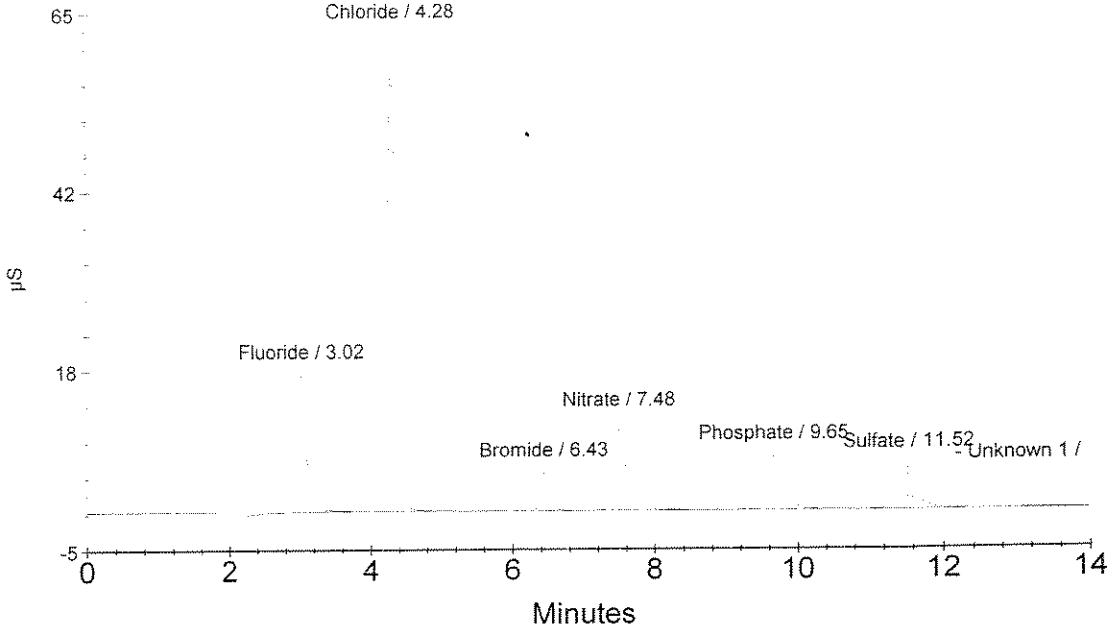
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNNSF

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	3.02	Fluoride	OK	2.194	1184480
2	4.28	Chloride	—	13.029	5379616
3	6.43	Bromide	OK	0.723	98715
4	7.48	Nitrate	OK	1.388	1261731
5	9.65	Phosphate		2.115	648976
6	11.52	Sulfate	—	1.629	408312

NO_2 OK
9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 SPK
Data File Name : ...\901_008.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 12:56:51 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

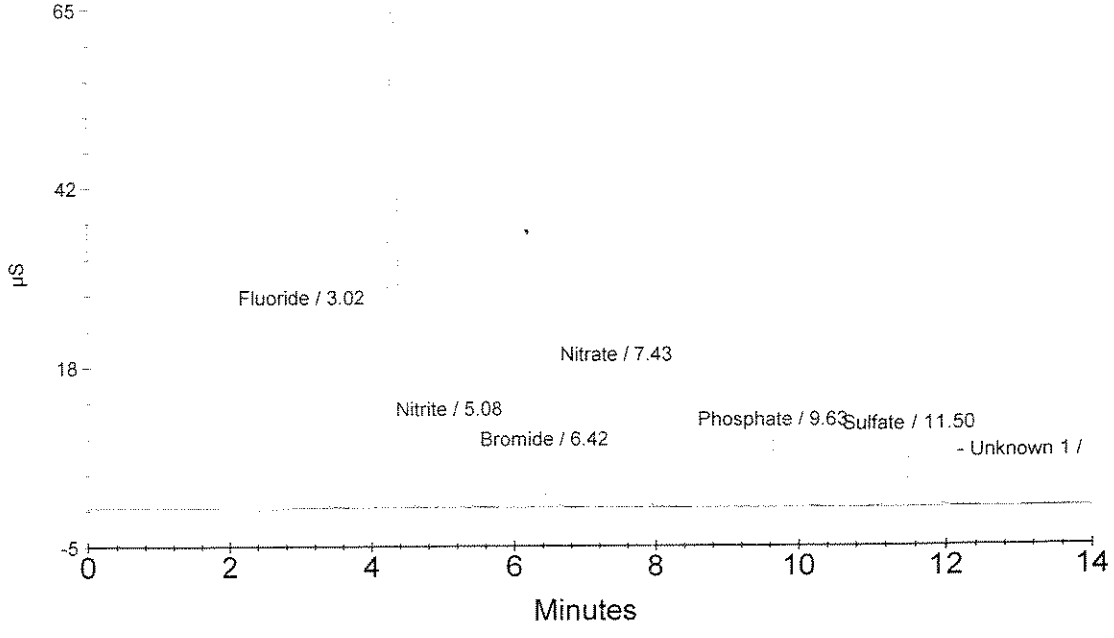
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNNSF

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	3.02	Fluoride	OK	3.200	1745611
2	4.28	Chloride	—	15.188	6280262
3	5.08	Nitrite	OK	0.927	683349
4	6.42	Bromide	OK	1.684	238859
5	7.43	Nitrate	OK	2.375	2218421
6	9.63	Phosphate		3.148	974155
7	11.50	Sulfate	—	3.594	923572

9/2/09



00675

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904406-001
Data File Name : ...\901_009.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 1:13:09 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

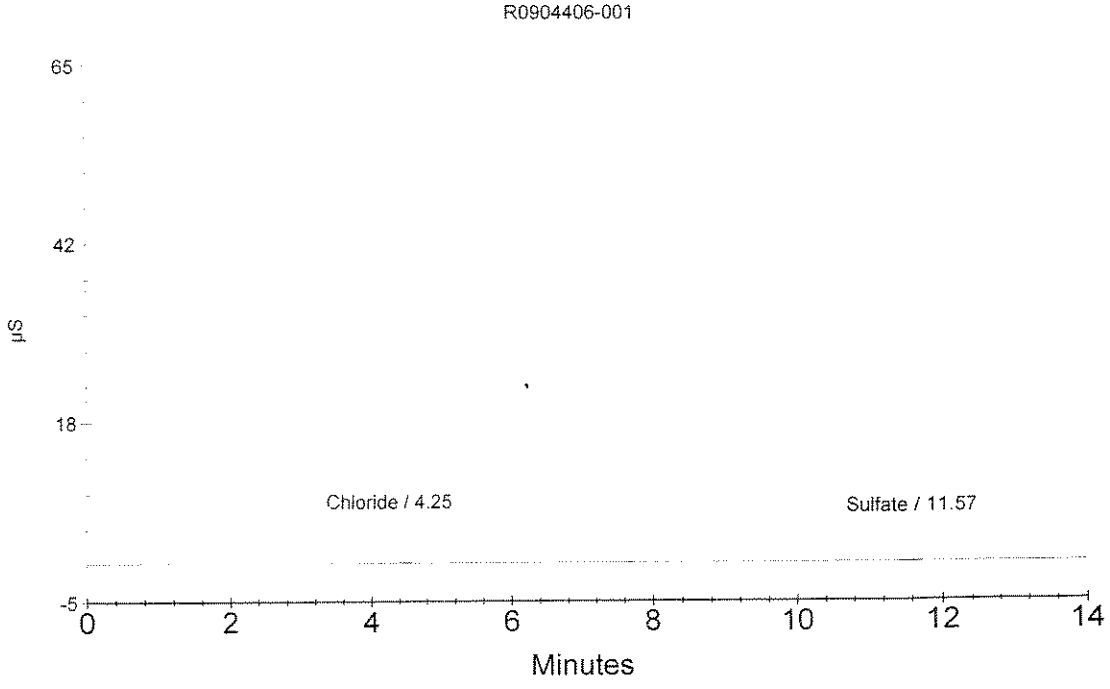
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.25	Chloride	~~Opt Ste.~~	0.312	74822
2	11.57	Sulfate	~~Ok~~	0.111	10424

9/2/09 Ok only



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904406-001 DUP
Data File Name : ...\901_010.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 1:29:27 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C

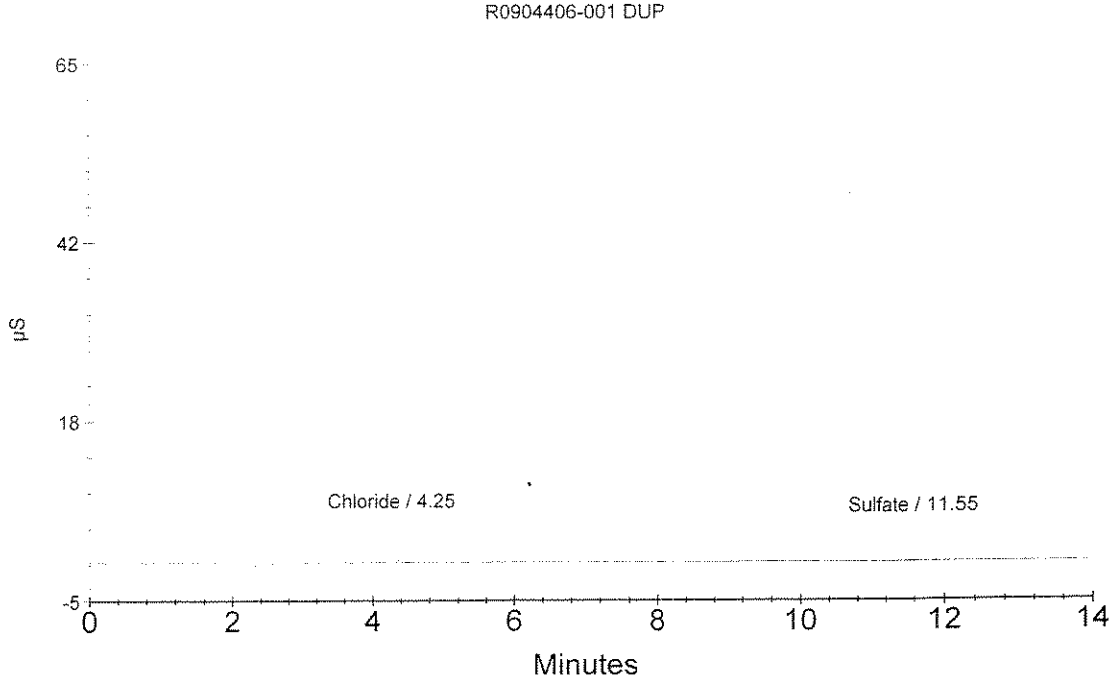
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	4.25	Chloride	0.299	69700
2	11.55	Sulfate	0.106	8973

ok

9/2/09



00678

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904406-001 SPK
Data File Name : ...\901_011.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 1:45:45 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

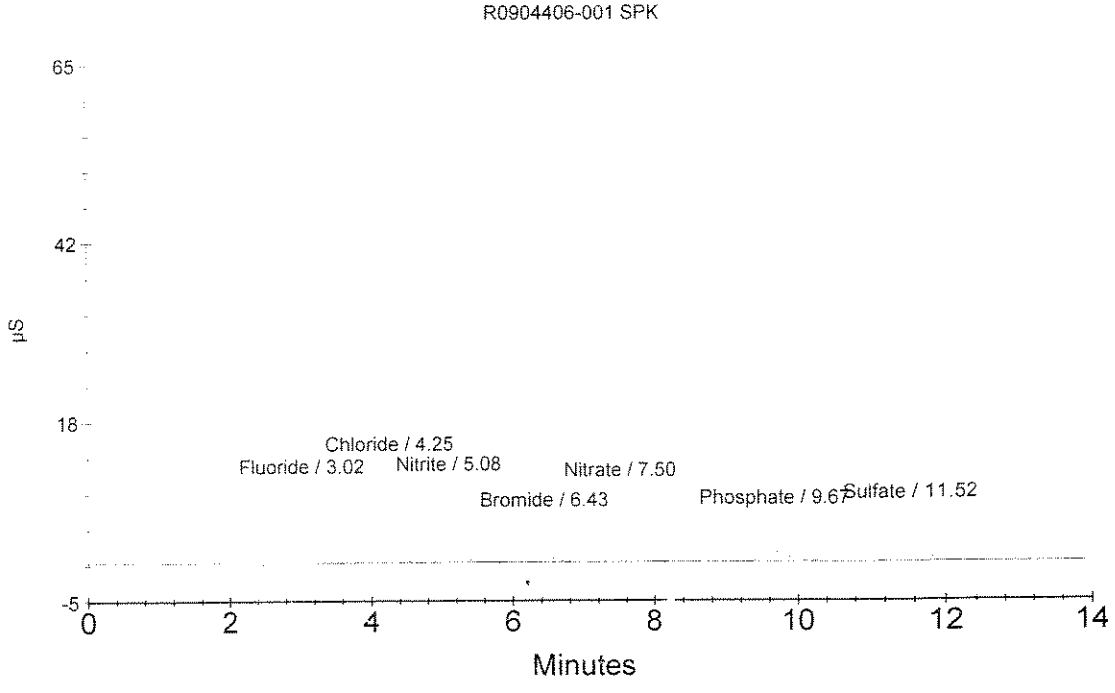
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.923	475887
2	4.25	Chloride	2.018	786721
3	5.08	Nitrite	0.944	696297
4	6.43	Bromide	0.984	136863
5	7.50	Nitrate	0.949	836756
6	9.67	Phosphate	0.962	285868
7	11.52	Sulfate	1.956	494043

9/1/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_012.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 2:02:01 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

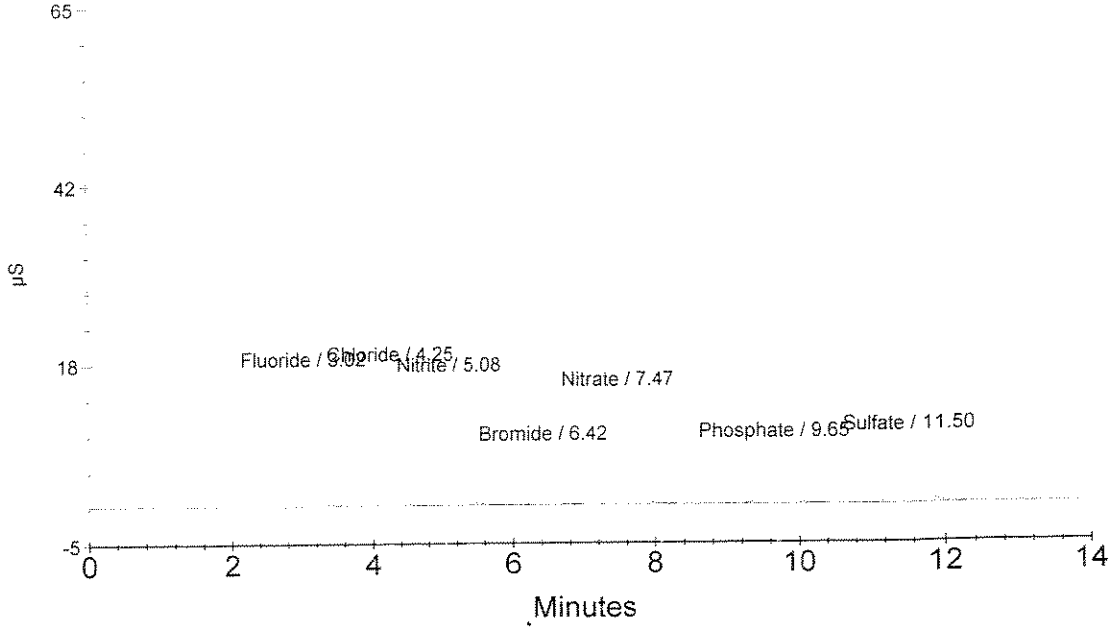
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.884	1012110
2	4.25	Chloride	2.919	1162369
3	5.08	Nitrite	1.755	1335926
4	6.42	Bromide	2.020	287897
5	7.47	Nitrate	1.700	1564448
6	9.65	Phosphate	1.748	533581
7	11.50	Sulfate	3.073	786924

OK

CCV



00680

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_013.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 2:18:19 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

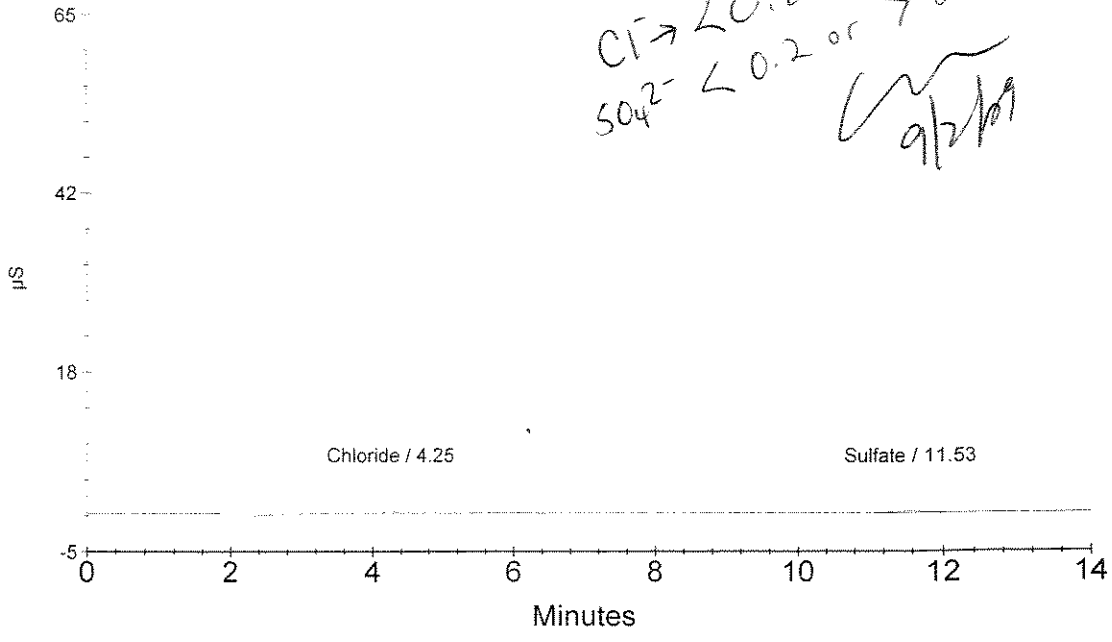
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.25	Chloride	HIGH	0.200	28272
2	11.53	Sulfate	↓	0.257	48531

9/2/09

Do not report Cl or SO4 unless Cl → <0.2 or >20mg/L on curve.
SO4 2- <0.2 or >257
9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013
Data File Name : ...\901_014.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 2:34:35 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 2.00
Sample Type : Sample Analysis
Sample Comment : C

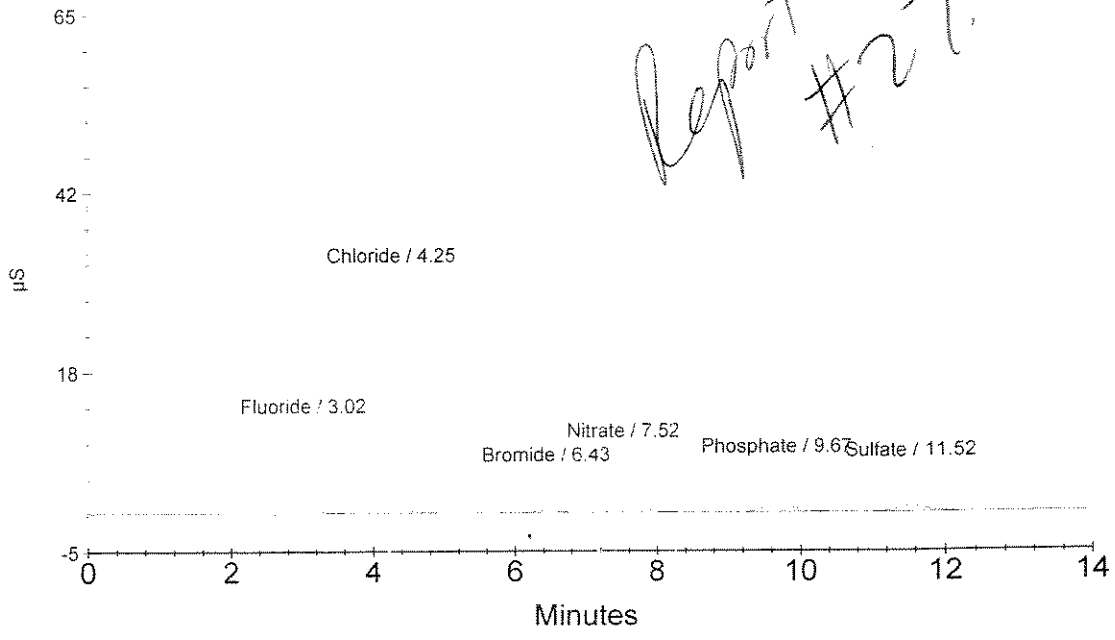
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	2.251	589066
2	4.25	Chloride	12.023	2452284
3	6.43	Bromide	0.749	47915
4	7.52	Nitrate	1.406	598494
5	9.67	Phosphate	2.195	328678
6	11.52	Sulfate	1.756	211428

OK
9/2/09

Report injection #27.



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 DUP
Data File Name : ...\901_015.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 2:50:53 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

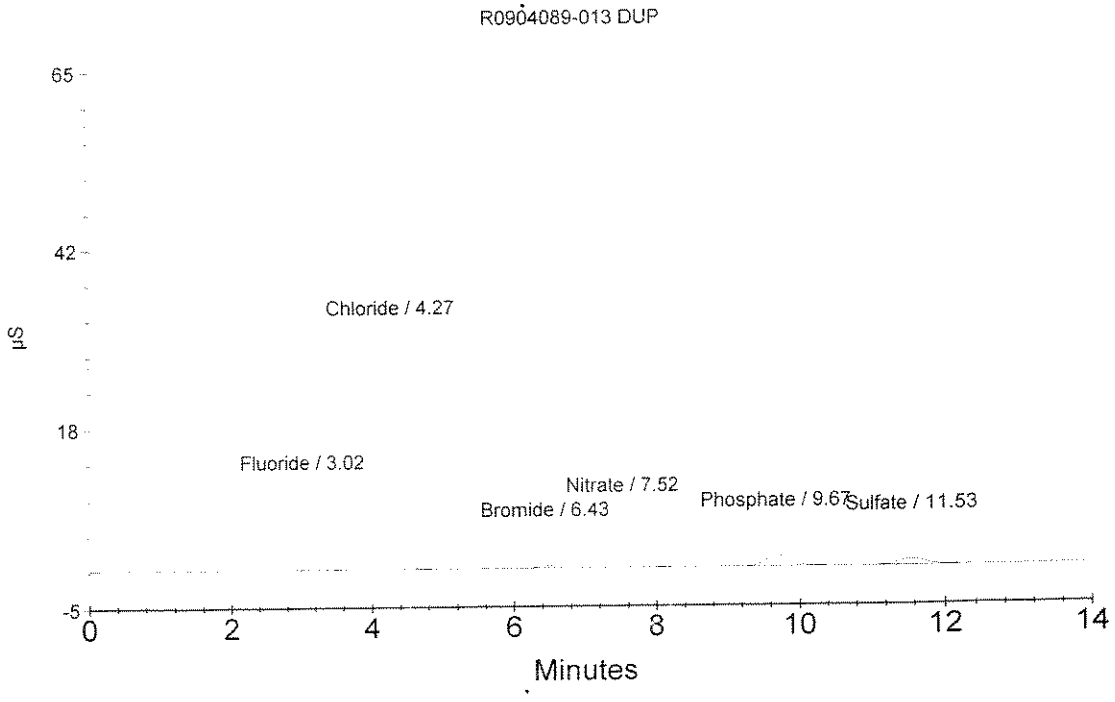
Dilution Factor : 2.00
Sample Type : Sample Analysis
Sample Comment : C

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	2.267	593547
2	4.27	Chloride	11.978	2442880
3	6.43	Bromide	0.685	43290
4	7.52	Nitrate	1.413	601939
5	9.67	Phosphate	2.216	332005
6	11.53	Sulfate	1.740	209321

9/2/09



00683

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 SPK
Data File Name : ...\901_016.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 3:07:10 PM

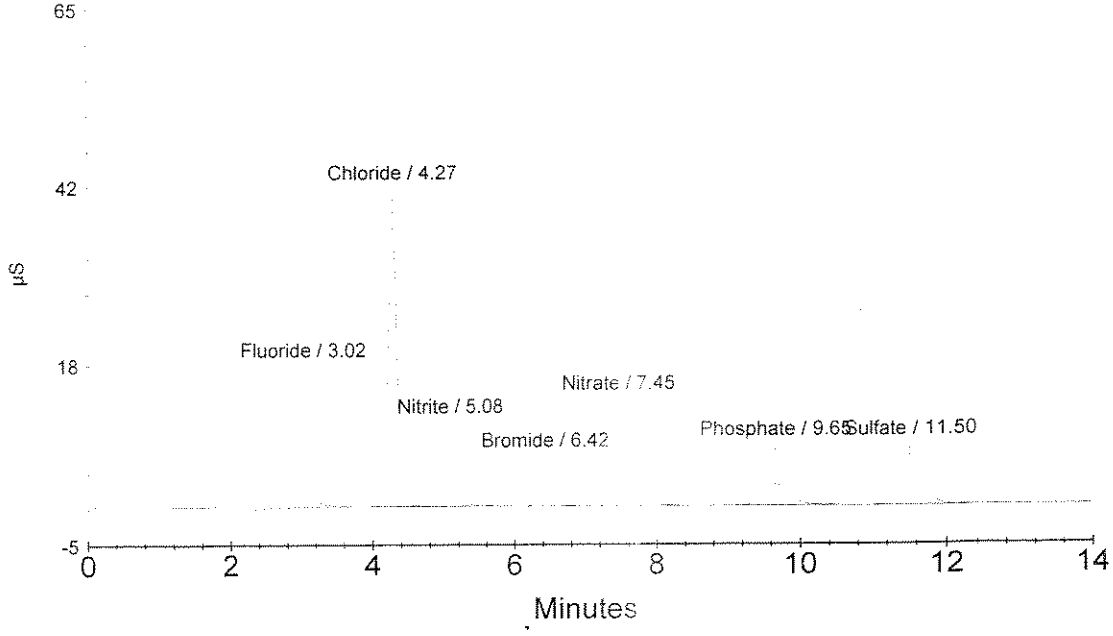
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 2.00
Sample Type : Sample Analysis
Sample Comment : C

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	4.156	1119912
2	4.27	Chloride	16.092	3300924
3	5.08	Nitrite	1.892	698324
4	6.42	Bromide	2.683	188905
5	7.45	Nitrate	3.289	1510357
6	9.65	Phosphate	4.171	639659
7	11.50	Sulfate	5.505	702887



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904223-019
Data File Name : ...\901_017.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 3:23:28 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : C (SPLP)

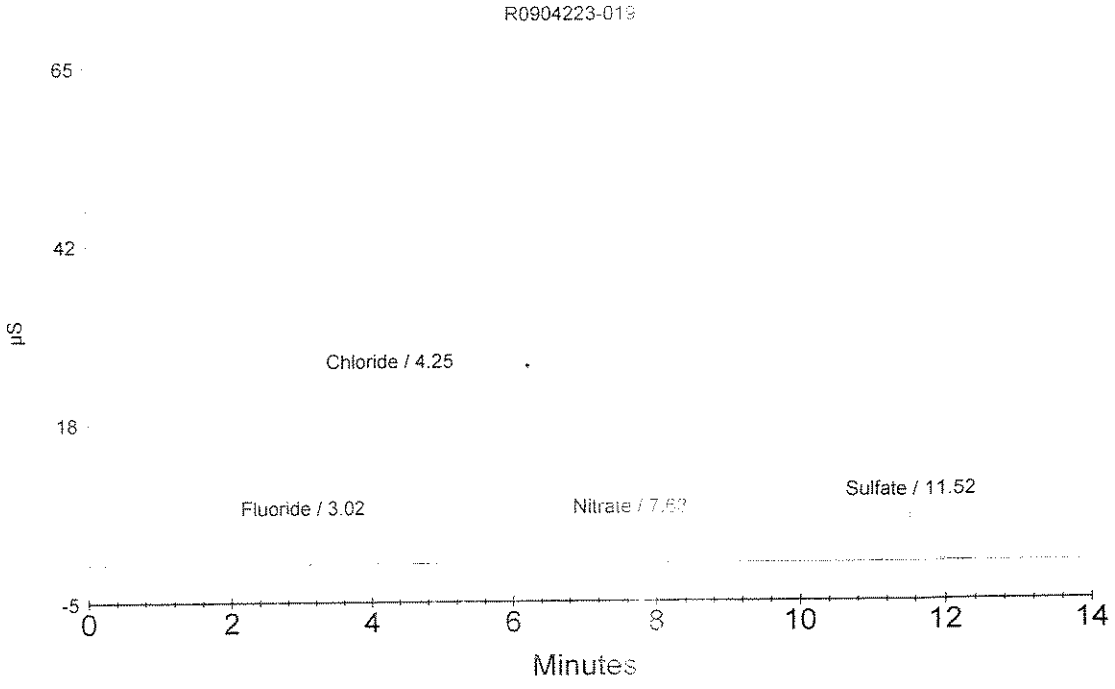
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.837	8278
2	4.25	Chloride	43.827	1772942
3	7.63	Nitrate	0.961	10897
4	11.52	Sulfate	21.665	549214

ok

9/2/09



00685

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8042-01
Data File Name : ...\901_018.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 3:39:47 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

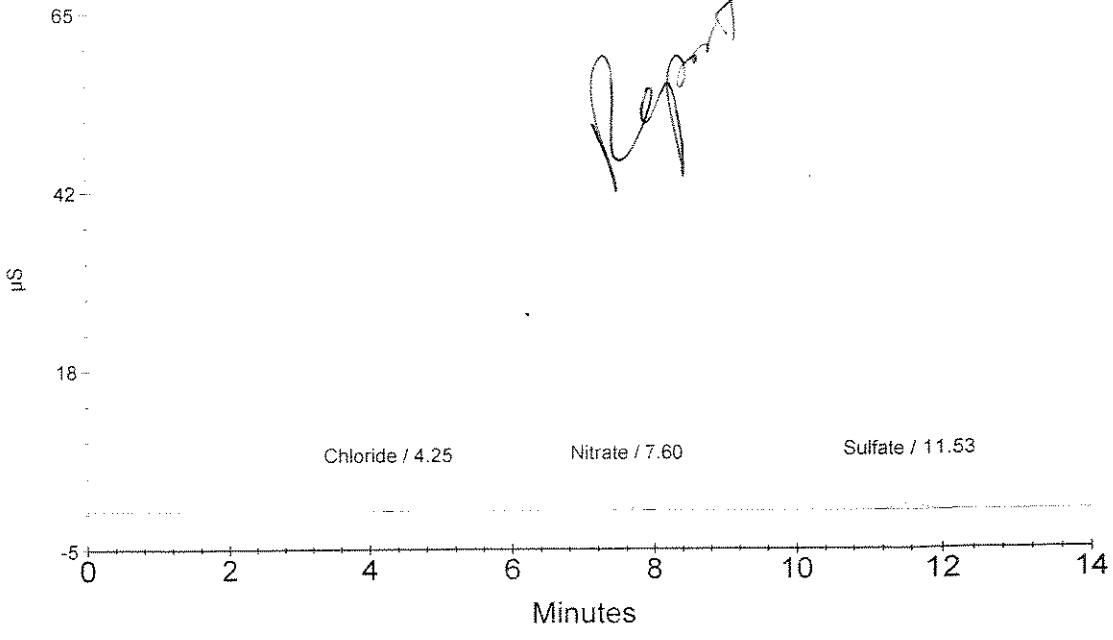
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.25	Chloride	OK	0.145	5152
2	7.60	Nitrate	↓	0.146	59212
3	11.53	Sulfate	OUT HIGH	0.867	208448

9/2/09

SO4 9/2/09

Repeat injection #34



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001
Data File Name : ...\901_019.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 3:56:05 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

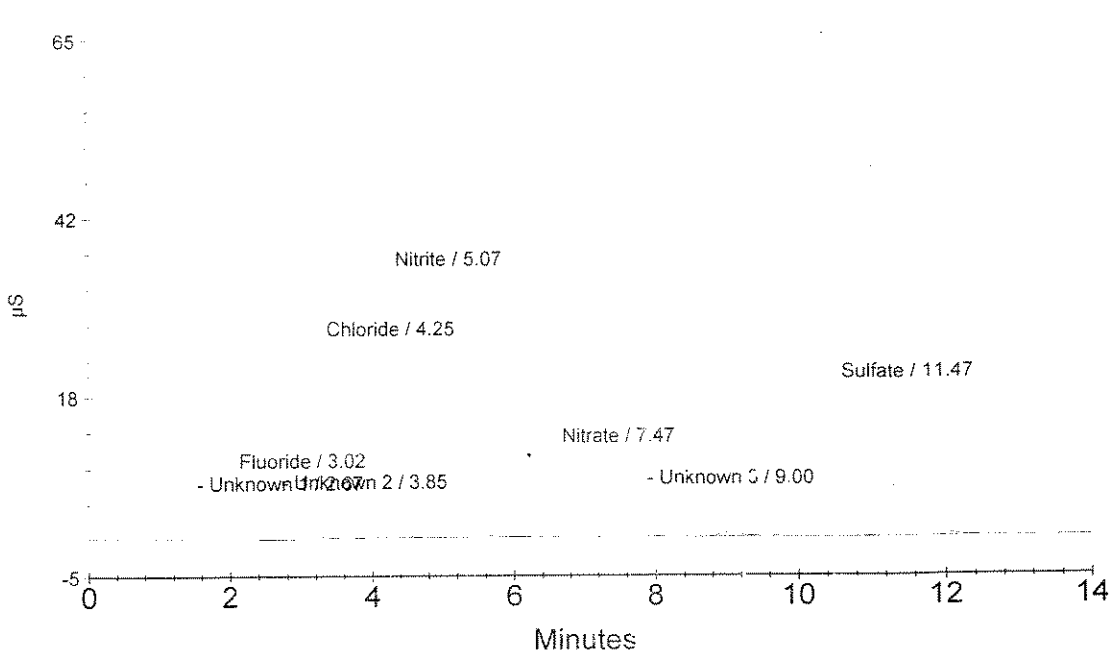
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	3.02	Fluoride		0.594	292758
4	4.25	Chloride	OK	4.587	1858328
5	5.07	Nitrite		4.645	3615032
6	7.47	Nitrate	OK	1.145	1026499
8	11.47	Sulfate		13.484	3516190

Br OK
9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001 DUP @ IC
Data File Name : ...\901_020.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 4:12:22 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

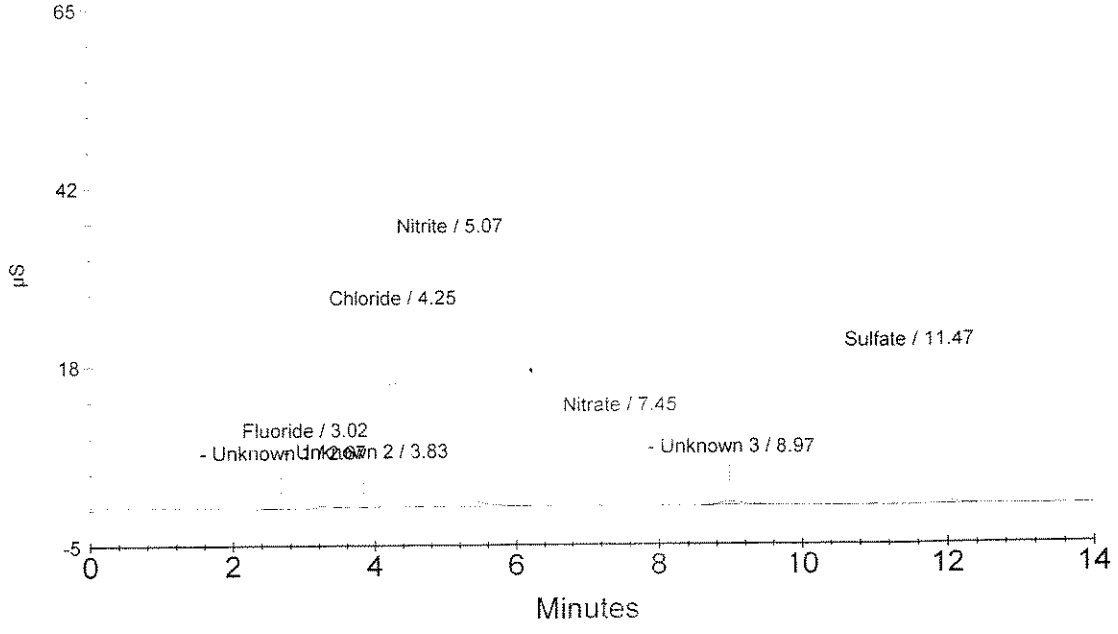
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	3.02	Fluoride		0.593	292174
4	4.25	Chloride	OK	4.577	1853947
5	5.07	Nitrite		4.644	3614314
6	7.45	Nitrate	OK	1.136	1018044
8	11.47	Sulfate		13.480	3515202

Br OK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001 SPK @ IC
Data File Name : ...\901_021.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 4:28:40 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

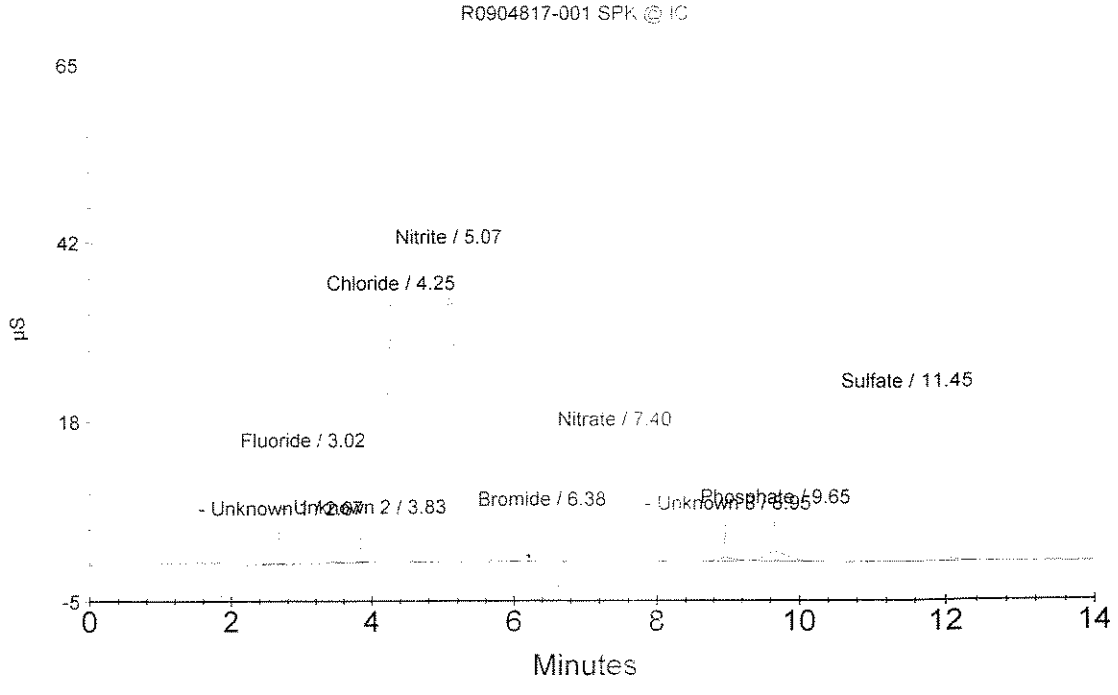
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	3.02	Fluoride		1.498	796775
4	4.25	Chloride	OK	6.636	2712643
5	5.07	Nitrite		5.603	4370251
6	6.38	Bromide	OK	0.962	133566
7	7.40	Nitrate	OK	2.108	1959270
9	9.65	Phosphate		0.875	258584
10	11.45	Sulfate		15.550	4057770

9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8043-01
Data File Name : ...\901_022.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 4:44:57 PM

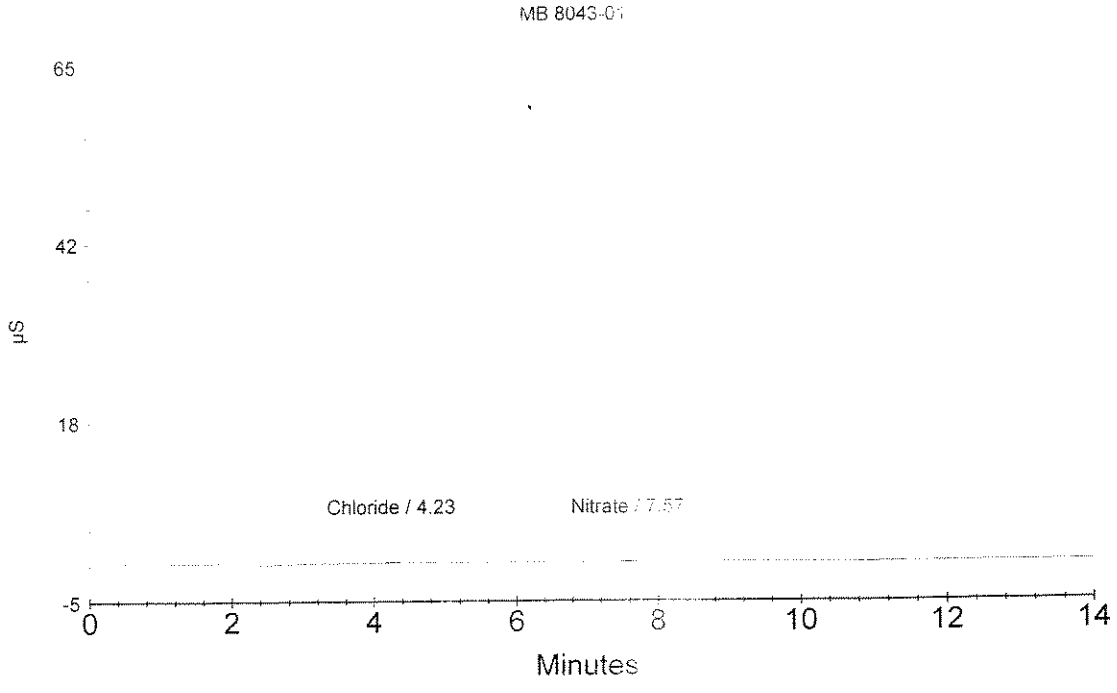
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.23	Chloride	OK	0.157	10102
2	7.57	Nitrate	OK	0.089	4029



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-002
Data File Name : ...\901_023.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 5:01:16 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

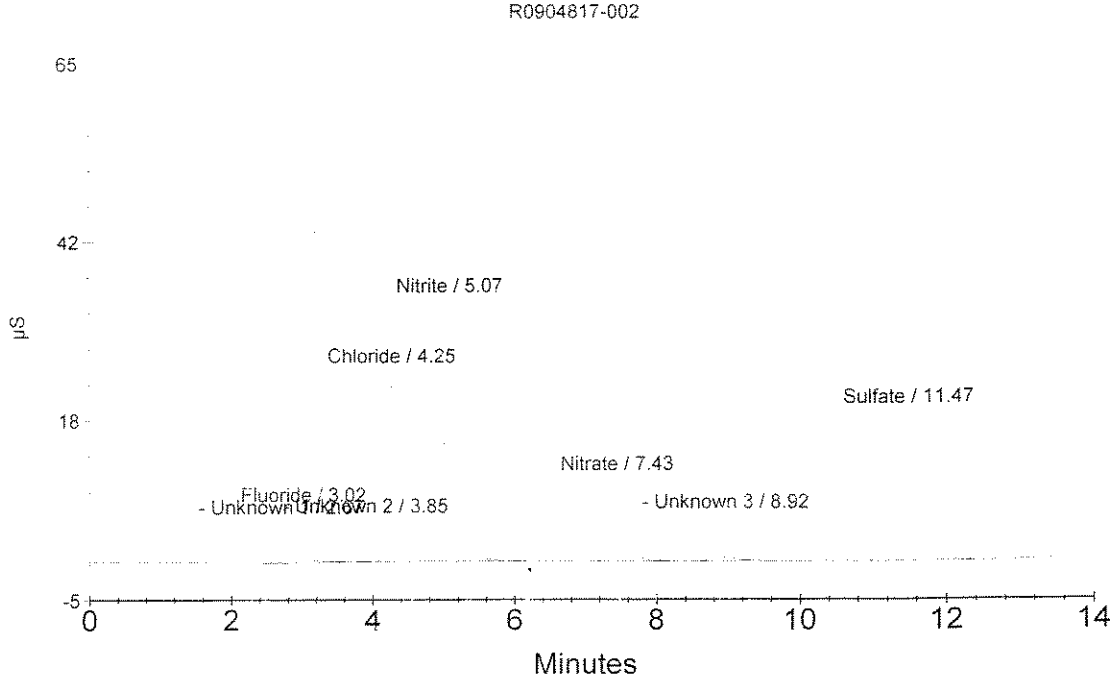
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	3.02	Fluoride		0.383	175231
4	4.25	Chloride	OK	4.462	1805847
5	5.07	Nitrite		4.506	3505651
6	7.43	Nitrate	OK	1.047	932206
8	11.47	Sulfate	1/2	13.356	3482744

Br OK



00631

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_024.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 5:17:35 PM

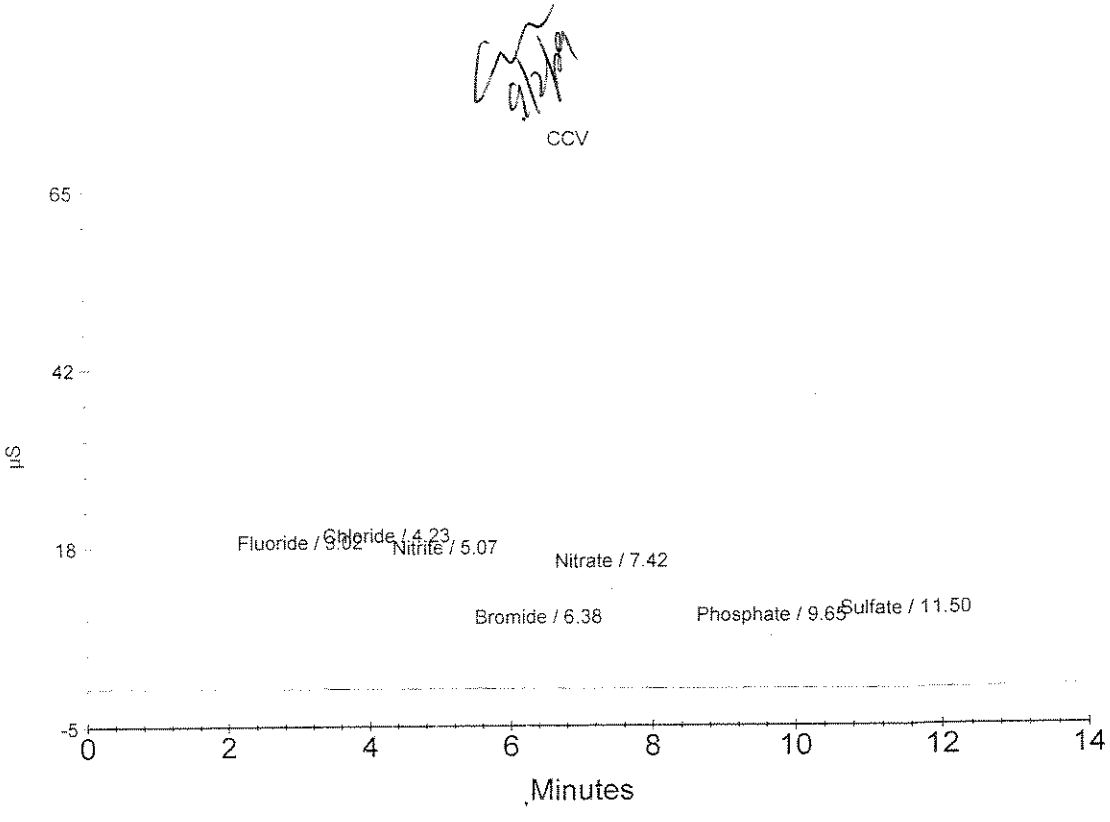
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.903	1022622
2	4.23	Chloride	3.019	1203928
3	5.07	Nitrite	1.777	1353496
4	6.38	Bromide	2.037	290314
5	7.42	Nitrate	1.737	1600459
6	9.65	Phosphate	1.776	542185
7	11.50	Sulfate	3.146	806136



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_025.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 5:33:53 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

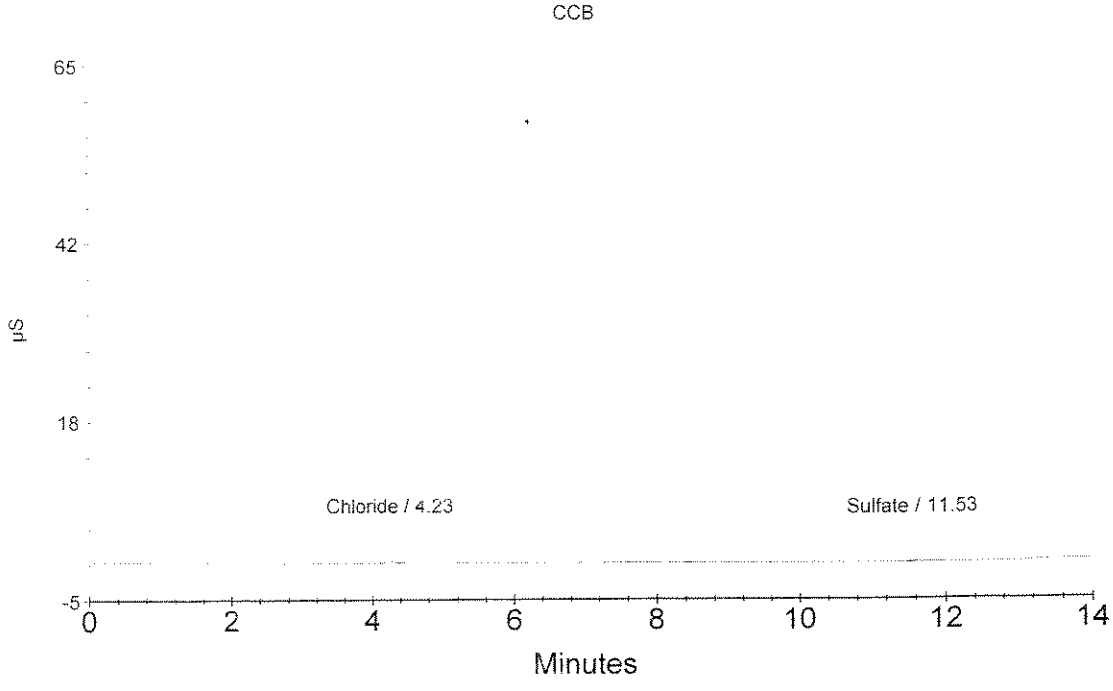
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.23	Chloride	ok	0.185	22038
2	11.53	Sulfate	ok	0.100	7530

9/14/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\901_026.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 5:50:10 PM

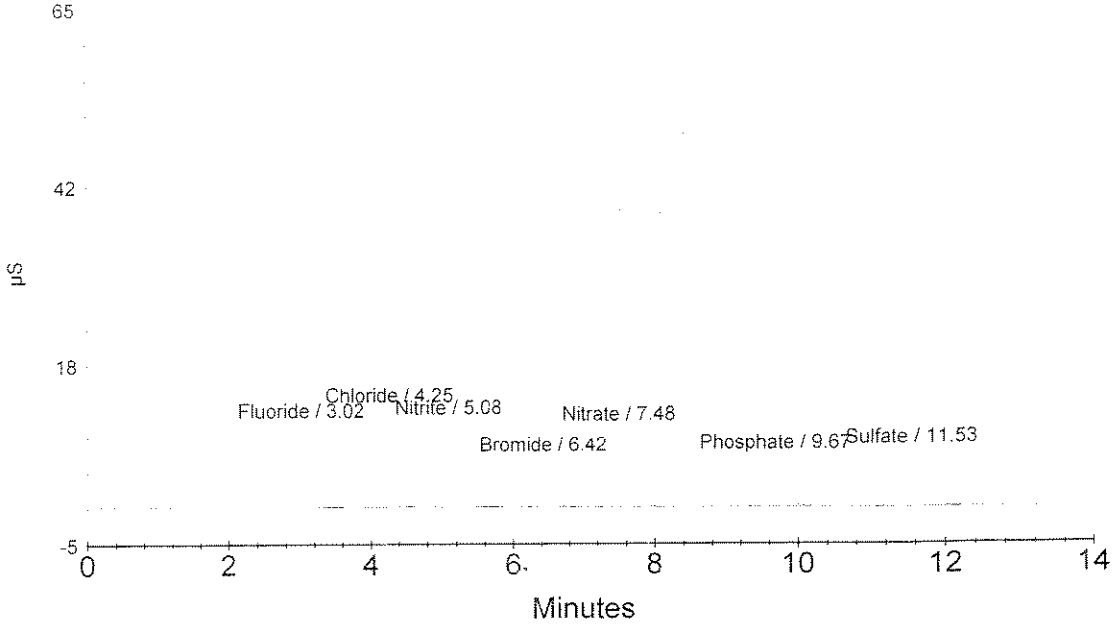
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.949	490610
2	4.25	Chloride	1.813	701096
3	5.08	Nitrite	0.962	710738
4	6.42	Bromide	1.004	139790
5	7.48	Nitrate	0.969	856309
6	9.67	Phosphate	0.993	295874
7	11.53	Sulfate	1.987	502234



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013
Data File Name : ...\901_027.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 6:06:31 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : S (SOIL)

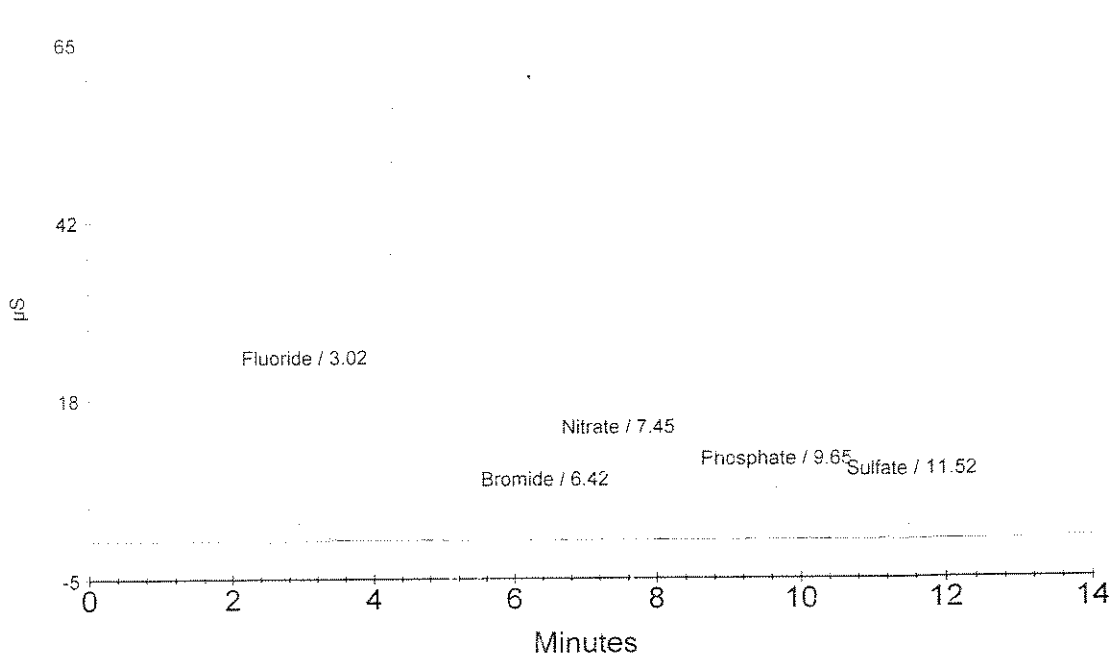
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	2.697	1464810
2	4.28	Chloride	13.389	5529895
3	6.42	Bromide	0.736	100671
4	7.45	Nitrate	1.416	1289109
5	9.65	Phosphate	2.484	765274
6	11.52	Sulfate	1.906	481053

OK

9/2/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 DUP
Data File Name : ...\901_028.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 6:22:48 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

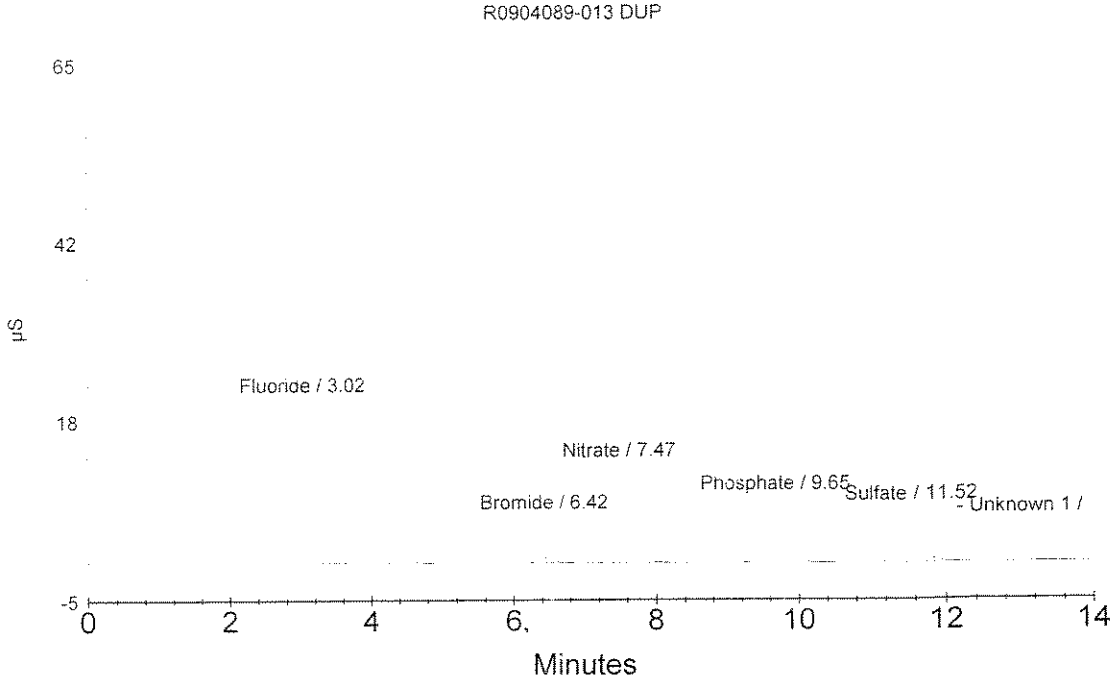
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : S (SOIL)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	2.573	1395867
2	4.28	Chloride	13.360	5517543
3	6.42	Bromide	0.744	101796
4	7.47	Nitrate	1.415	1288176
5	9.65	Phosphate	2.376	731185
6	11.52	Sulfate	1.810	455659

OK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 SPK
Data File Name : ...\901_029.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 6:39:06 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

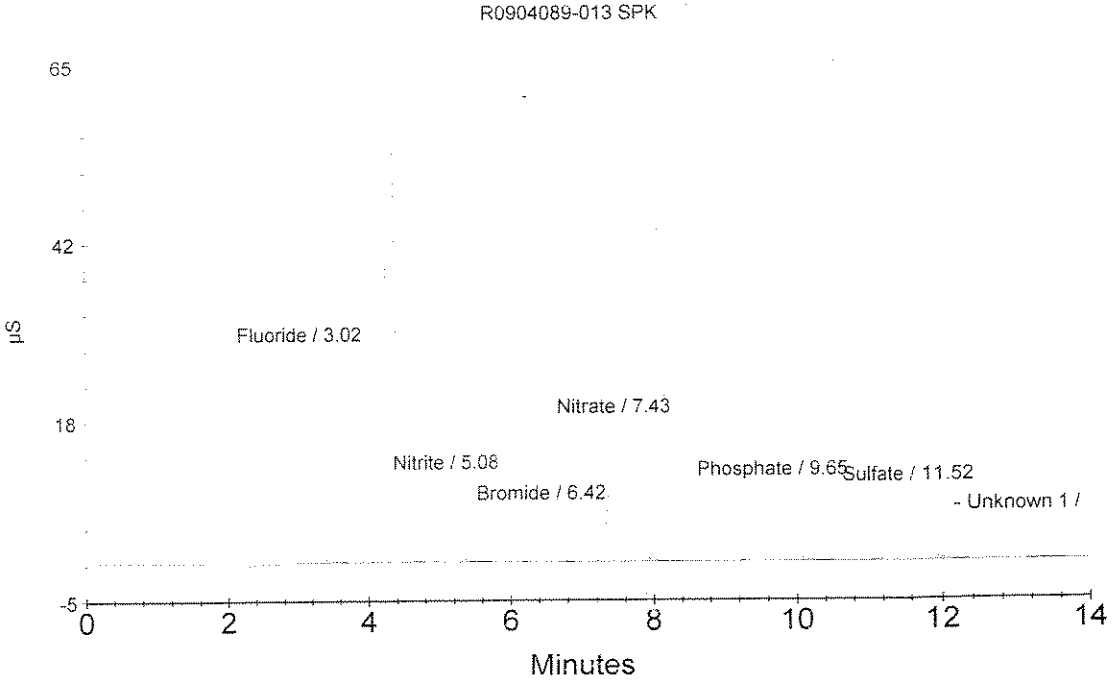
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : S (SOIL)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	3.699	2023599
2	4.28	Chloride	15.625	6462344
3	5.08	Nitrite	0.940	693502
4	6.42	Bromide	1.696	240631
5	7.43	Nitrate	2.411	2252585
6	9.65	Phosphate	3.524	1092567
7	11.52	Sulfate	3.846	989538

OK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013
Data File Name : ...\901_030.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 6:55:25 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C (SOIL)

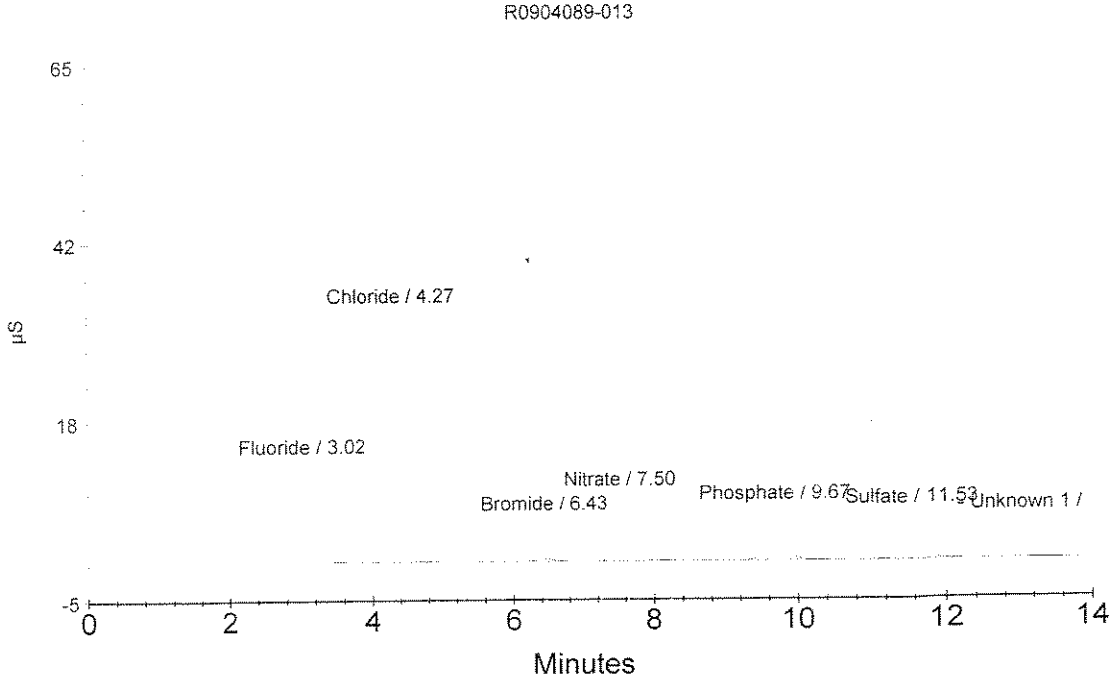
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.314	694163
2	4.27	Chloride	6.127	2500566
3	6.43	Bromide	0.376	48110
4	7.50	Nitrate	0.713	608336
5	9.67	Phosphate	1.246	375547
6	11.53	Sulfate	1.016	247719

OK

9/2/09



00598

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 DUP
Data File Name : ...\901_031.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 7:11:42 PM

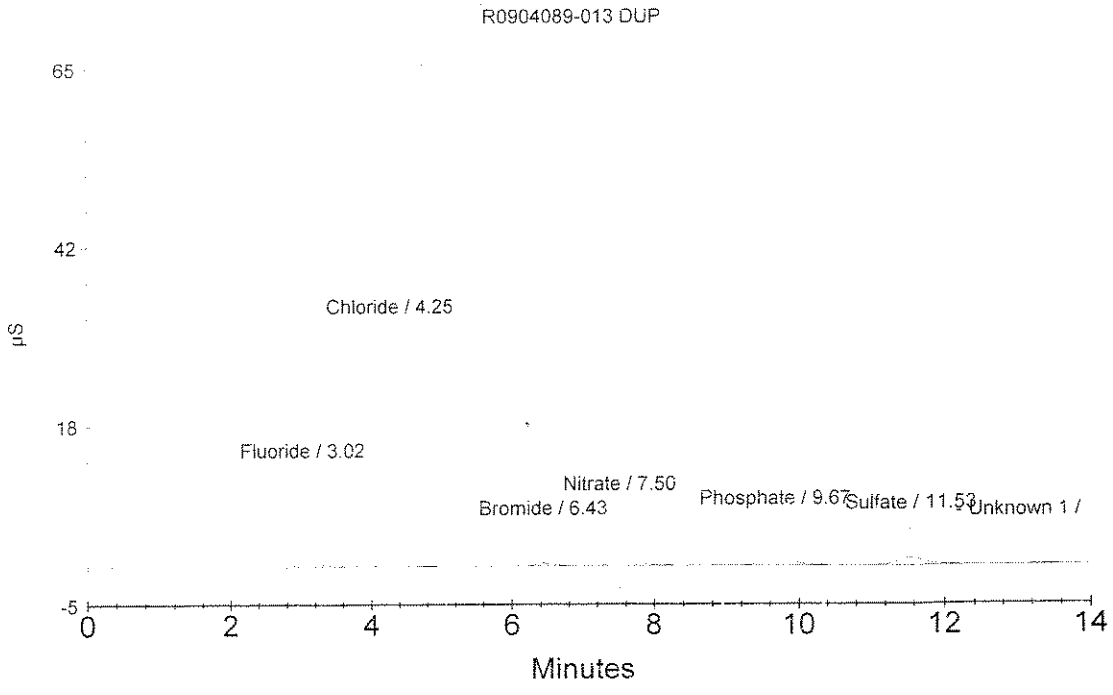
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C (SOIL)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.312	692736
2	4.25	Chloride	6.143	2507106
3	6.43	Bromide	0.378	48463
4	7.50	Nitrate	0.715	610399
5	9.67	Phosphate	1.248	376186
6	11.53	Sulfate	1.010	246062



00699

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904089-013 SPK
Data File Name : ...\901_032.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 7:27:59 PM

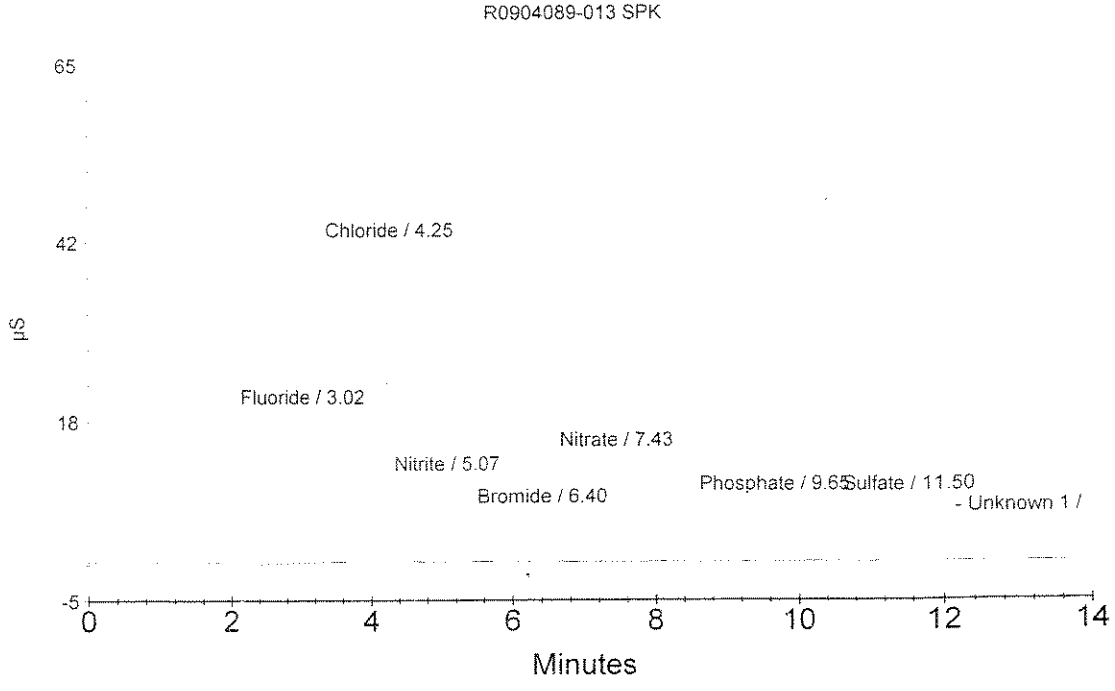
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C (SOIL)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	2.271	1227591
2	4.25	Chloride	8.211	3369964
3	5.07	Nitrite	0.938	691576
4	6.40	Bromide	1.335	187941
5	7.43	Nitrate	1.653	1518521
6	9.65	Phosphate	2.228	684629
7	11.50	Sulfate	2.865	732430



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904223-019
Data File Name : ...\901_033.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 7:44:16 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : C (SPLP)

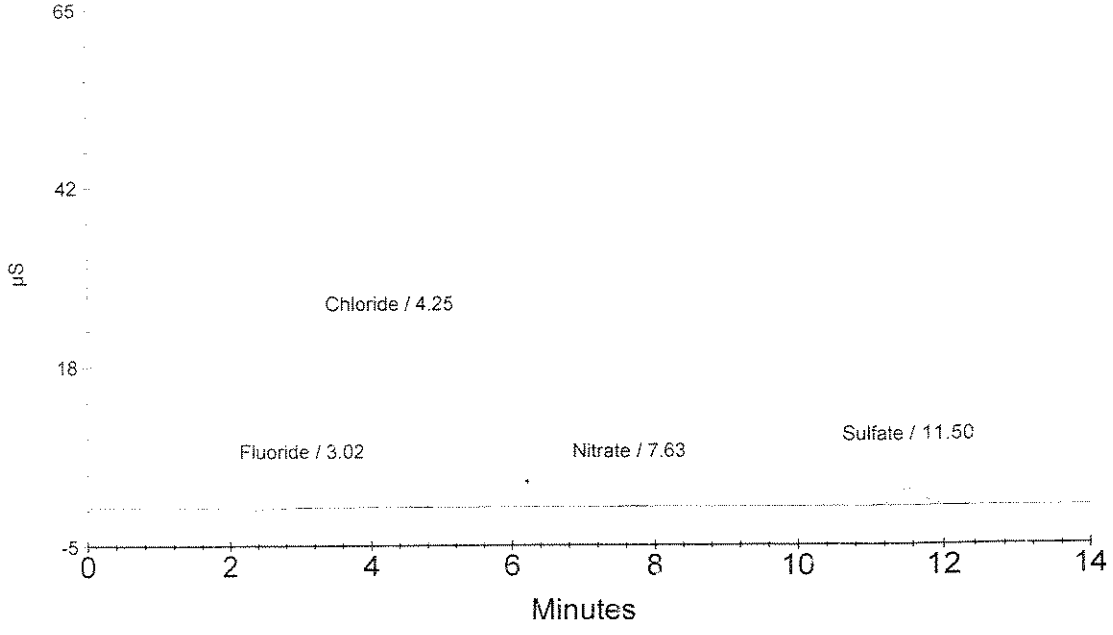
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.840	8429
2	4.25	Chloride	43.737	1769174
		Bromide		
3	7.63	Nitrate	0.952	9972
4	11.50	Sulfate	21.632	548357

OK

9/1/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8042-01
Data File Name : ...\901_034.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 8:00:34 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

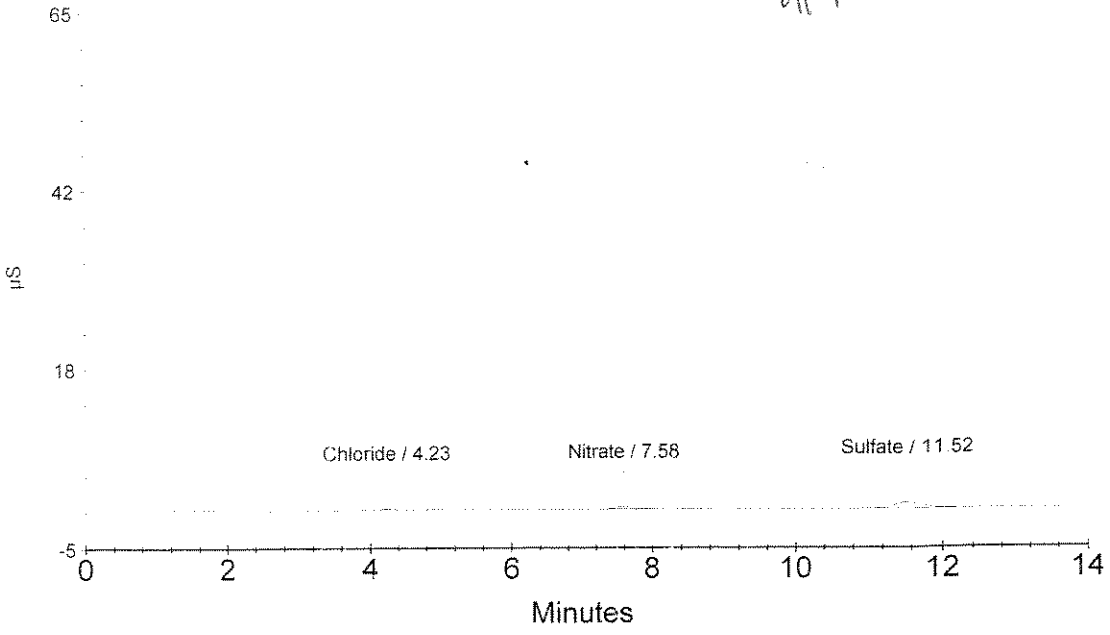
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.23	Chloride	ok	0.164	13074
2	7.58	Nitrate	ok	0.146	58741
3	11.52	Sulfate	ok	0.858	206227

9/2/09

HNO_3 & H_2SO_4 used in soln.

9/2/09



00702

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001
Data File Name : ...\901_035.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 8:16:52 PM

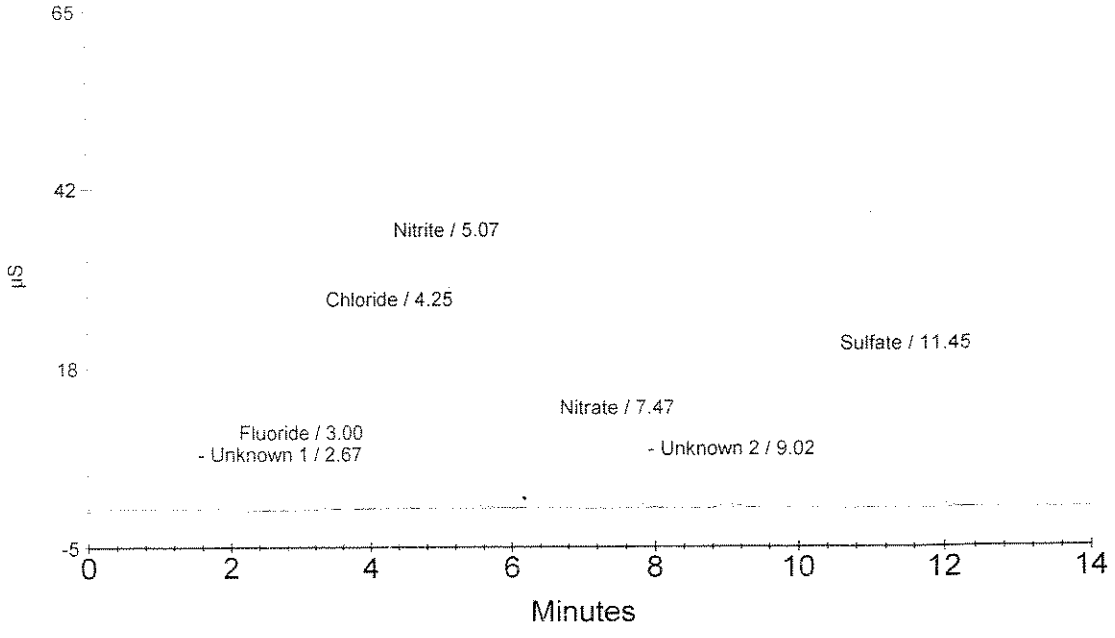
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	3.00	Fluoride	0.596	293621
3	4.25	Chloride	4.644	1881791
4	5.07	Nitrite	4.656	3623423
5	7.47	Nitrate	1.136	1017999
7	11.45	Sulfate	13.540	3530938



00703

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_036.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 8:33:09 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

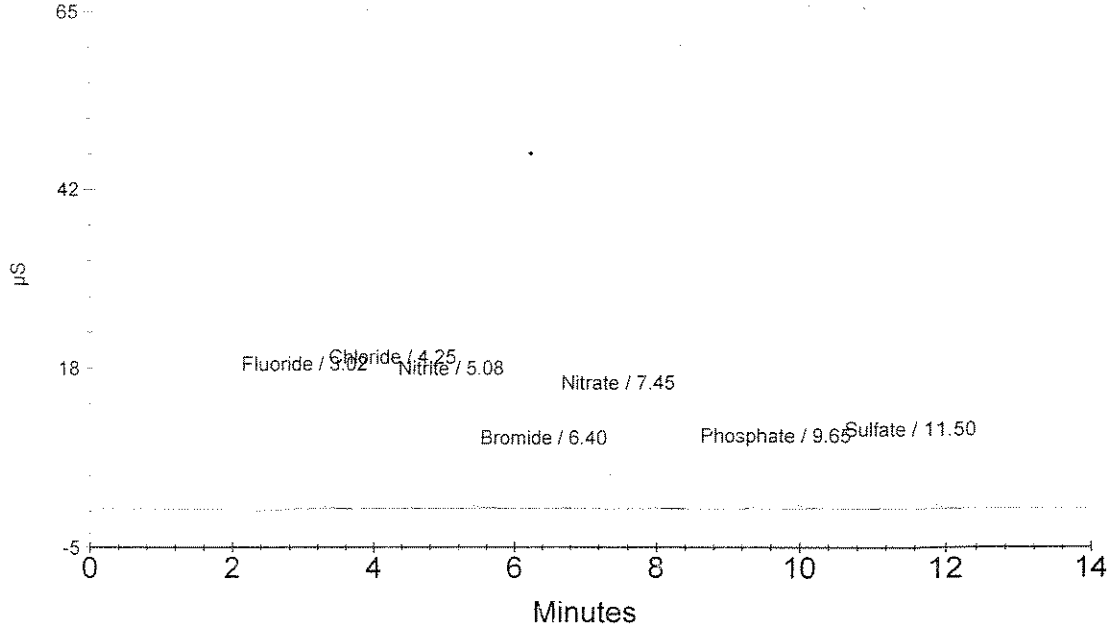
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.876	1007175
2	4.25	Chloride	2.946	1173590
3	5.08	Nitrite	1.764	1343407
4	6.40	Bromide	2.018	287532
5	7.45	Nitrate	1.718	1581576
6	9.65	Phosphate	1.761	537452
7	11.50	Sulfate	3.105	795308

OK

9/2/09



00704

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_037.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 8:49:27 PM

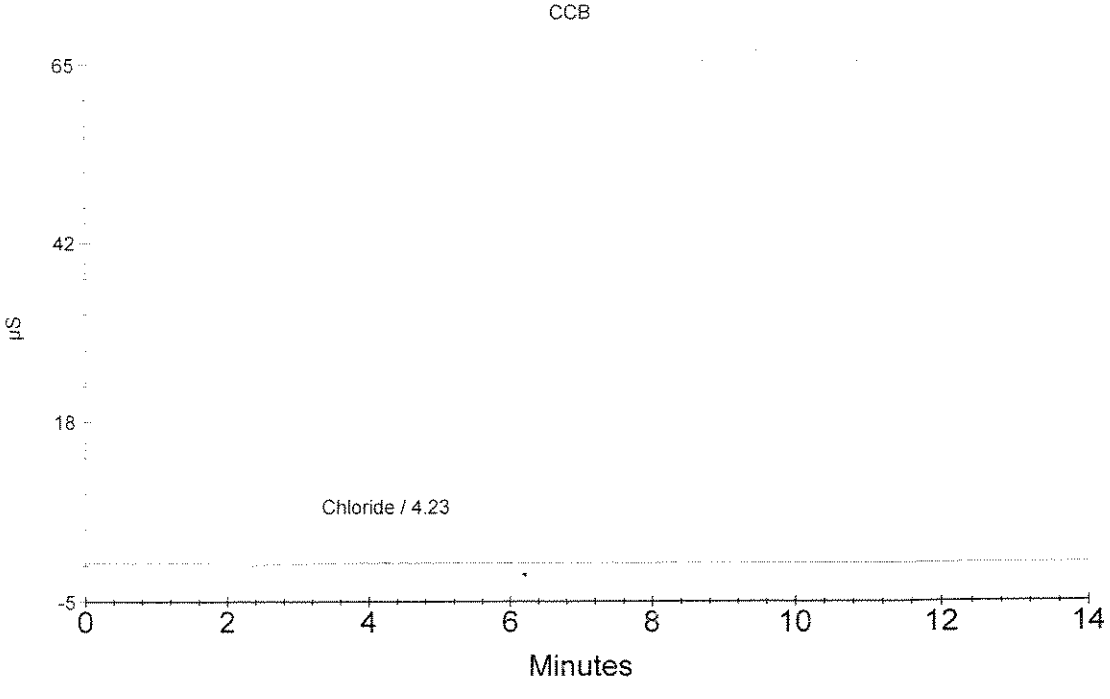
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.23	Chloride	DK	0.143	4273



00705

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-001
Data File Name : ...\901_038.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 9:05:43 PM

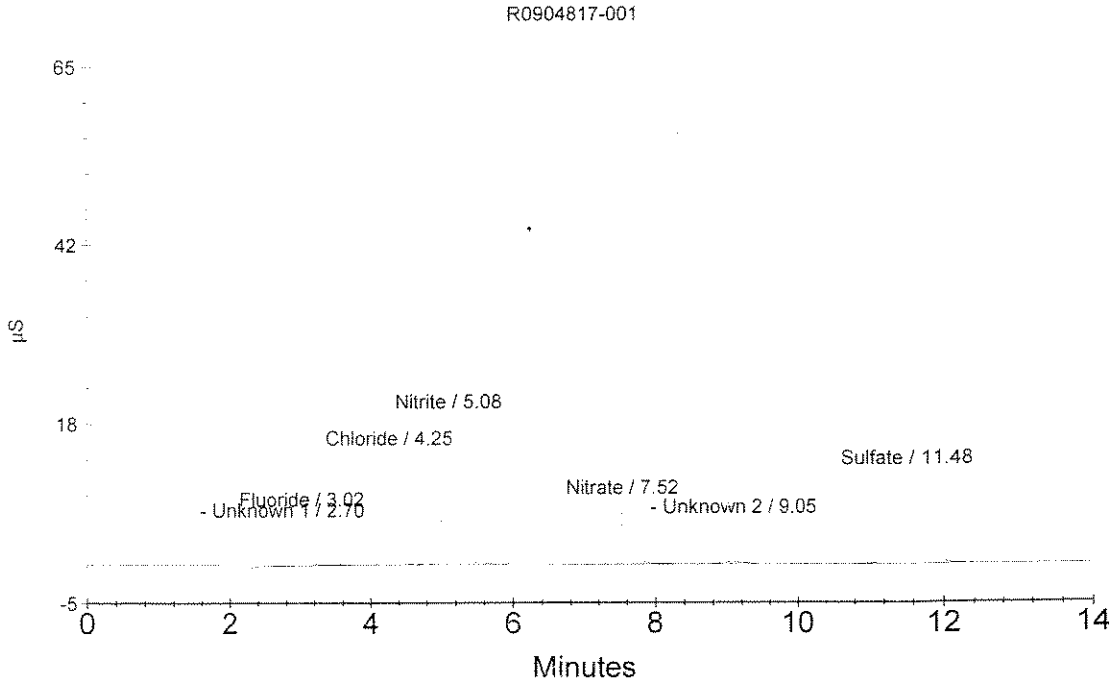
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 2.00
Sample Type : Sample Analysis
Sample Comment : S (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	3.02	Fluoride	0.663	146388
3	4.25	Chloride	4.478	878713
4	5.08	Nitrite	4.434	1700541
5	7.52	Nitrate	1.168	483441
7	11.48	Sulfate	12.656	1640236



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 8043-01
Data File Name : ...\901_039.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 9:22:00 PM

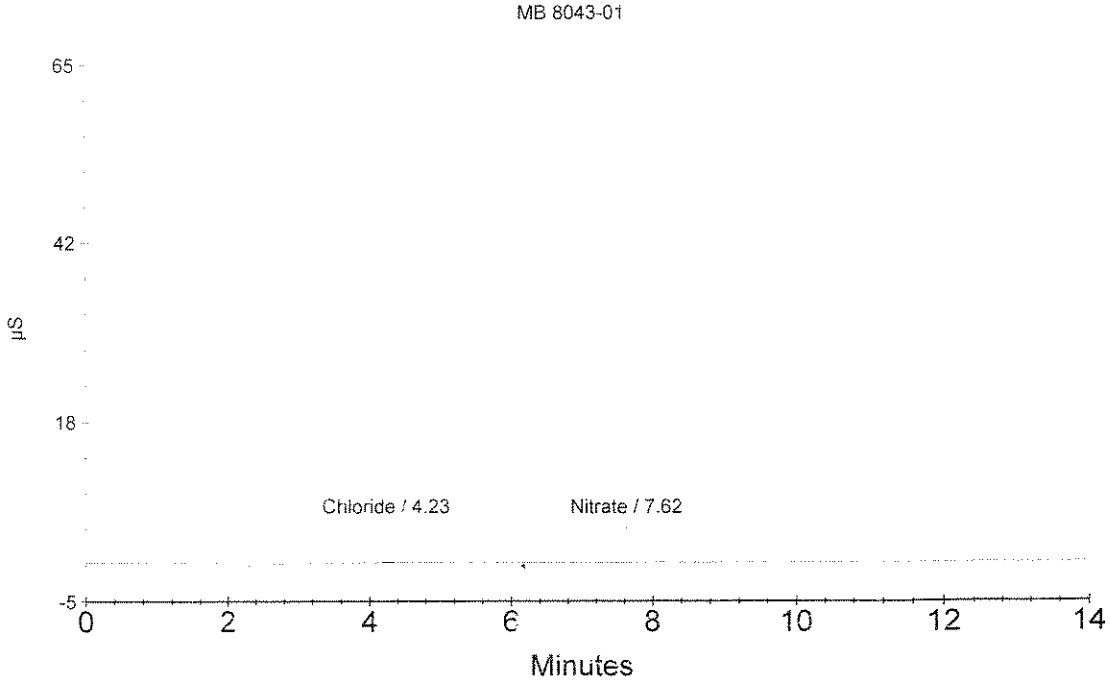
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.23	Chloride		0.152	8322
2	7.62	Nitrate		0.088	3118



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-002
Data File Name : ...\901_040.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 9:38:17 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

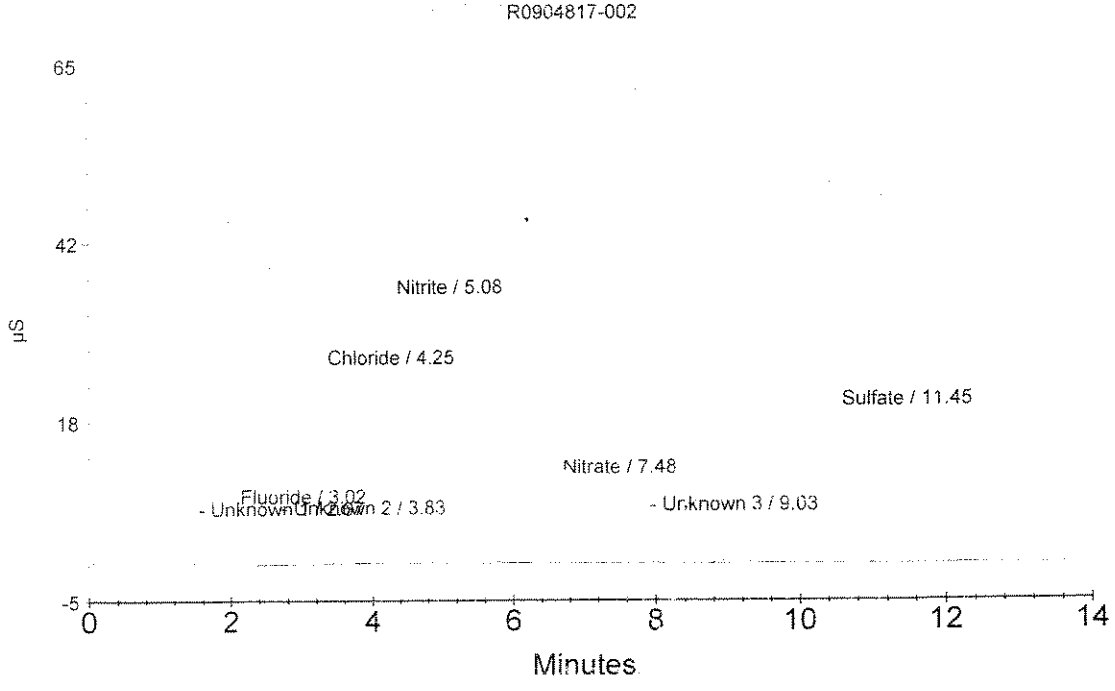
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	3.02	Fluoride	0.380	173626
4	4.25	Chloride	4.495	1819959
5	5.08	Nitrite	4.544	3535141
6	7.48	Nitrate	1.047	931966
8	11.45	Sulfate	13.436	3503685

9/2/09



00708

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904817-002
Data File Name : ...\901_041.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 9:54:35 PM

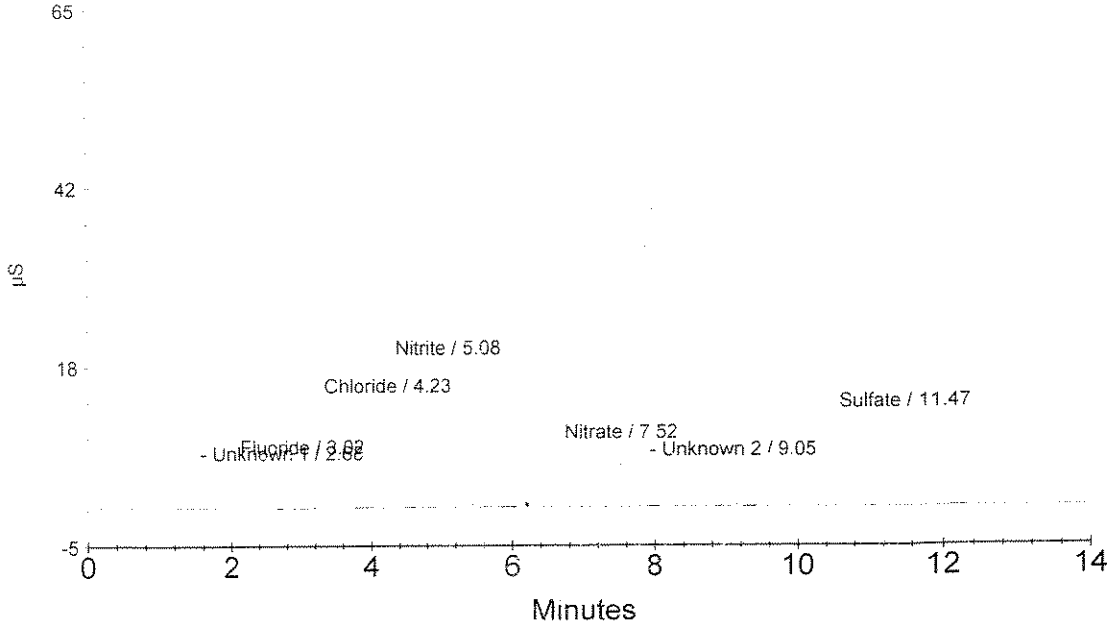
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 2.00
Sample Type : Sample Analysis
Sample Comment : S (SPLP)

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	3.02	Fluoride	0.416	77570
3	4.23	Chloride	4.323	846475
4	5.08	Nitrite	4.312	1652568
5	7.52	Nitrate	1.086	443643
7	11.47	Sulfate	12.543	1625388



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_042.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:10:52 PM

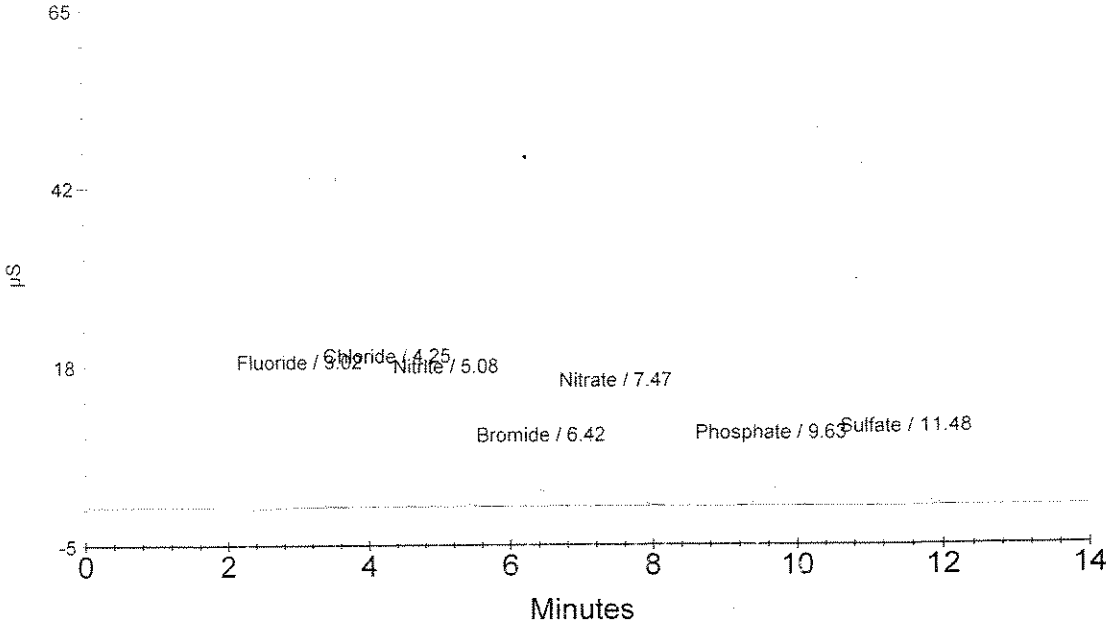
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.865	1001306
2	4.25	Chloride	2.923	1164012
3	5.08	Nitrite	1.767	1345292
4	6.42	Bromide	2.013	286876
5	7.47	Nitrate	1.714	1578088
6	9.63	Phosphate	1.759	536787
7	11.48	Sulfate	3.073	786934



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_043.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:27:09 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

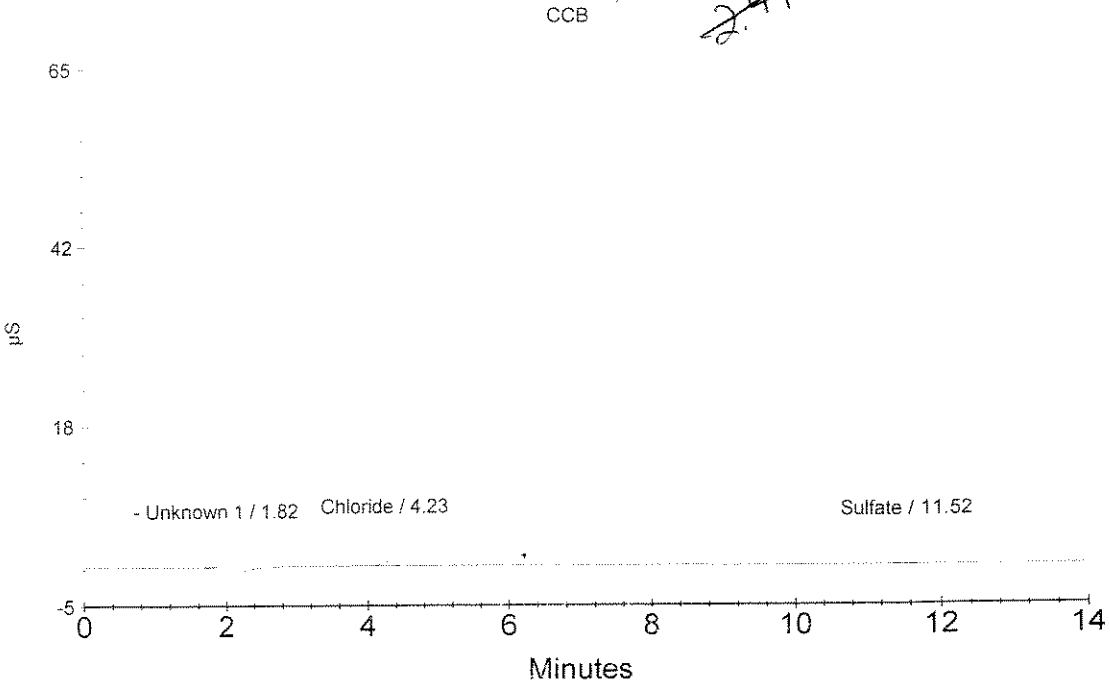
Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	4.23	Chloride	H16H	0.249	48673
3	11.52	Sulfate	ax	0.110	9981

9/2/09

Cl can be reported if Cl- < 0.2 or 2.49 → Cl- 7 9/2/09



00711

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\901_044.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:43:26 PM

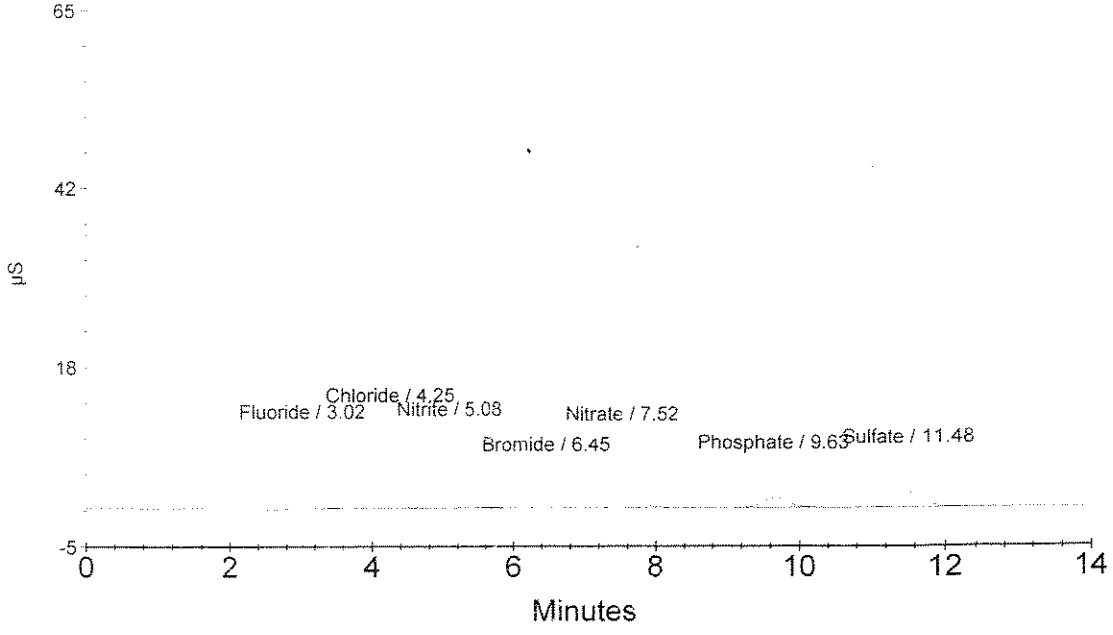
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	0.930	480099
2	4.25	Chloride	1.844	714088
3	5.08	Nitrite	0.956	705724
4	6.45	Bromide	1.004	139727
5	7.52	Nitrate	0.974	861286
6	9.63	Phosphate	0.998	297497
7	11.48	Sulfate	2.015	509481



00712

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0904406-001
Data File Name : ...\901_045.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 10:59:43 PM

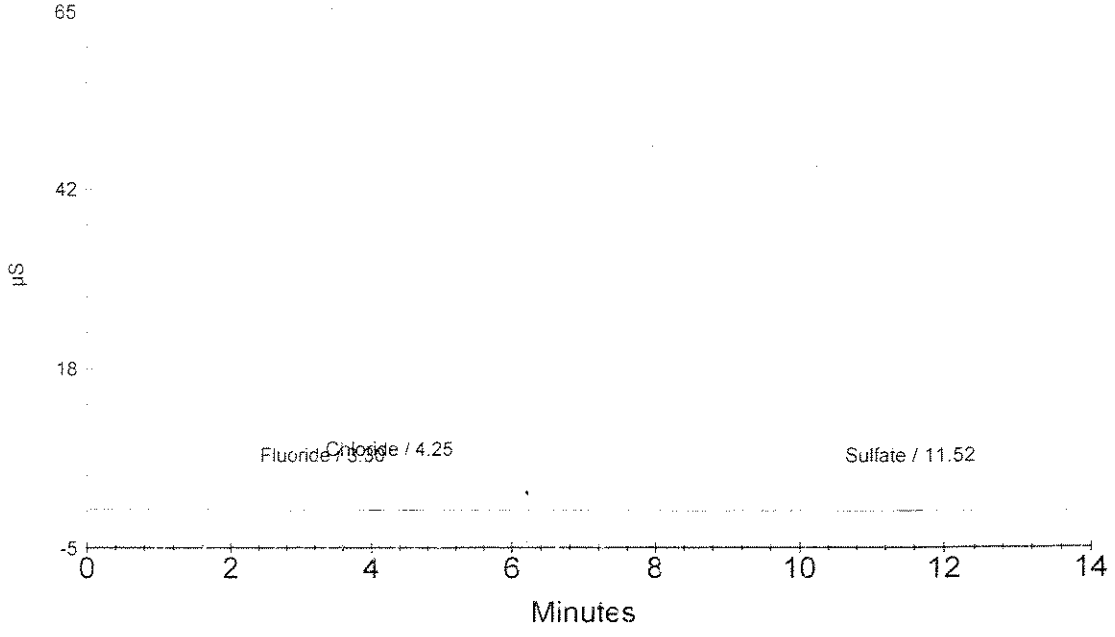
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : C

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.30	Fluoride	0.084	8523
2	4.25	Chloride	0.352	91601
3	11.52	Sulfate	0.115	11431



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\901_046.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 11:16:01 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

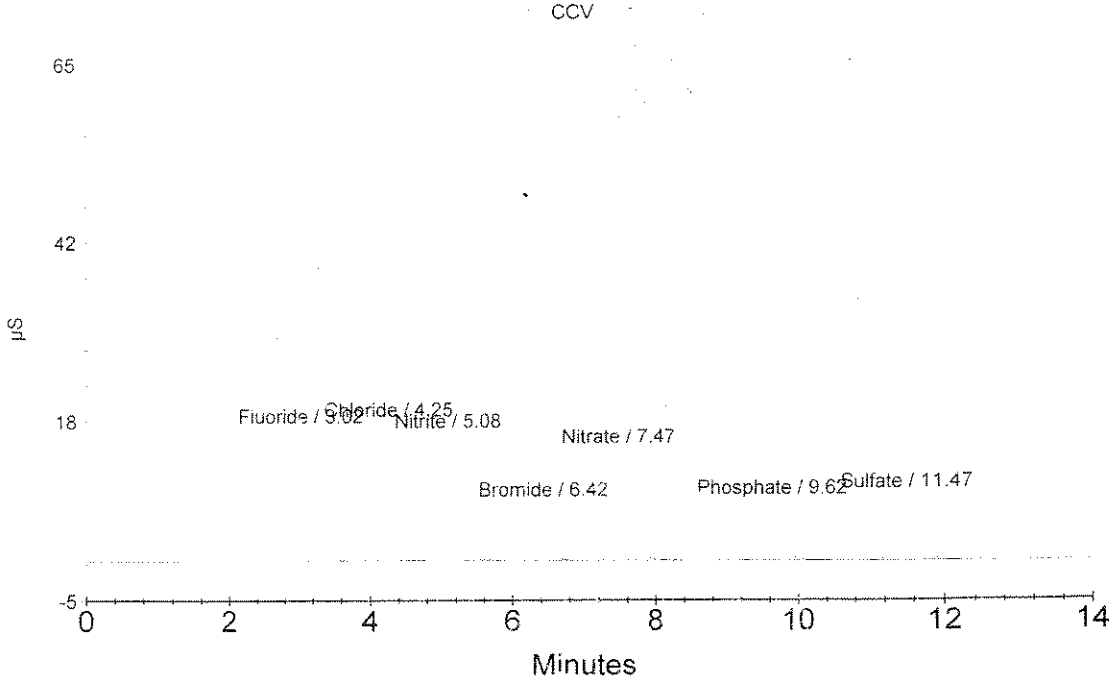
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.02	Fluoride	1.868	1002953
2	4.25	Chloride	2.955	1177259
3	5.08	Nitrite	1.774	1351334
4	6.42	Bromide	2.027	288846
5	7.47	Nitrate	1.715	1578771
6	9.62	Phosphate	1.763	538281
7	11.47	Sulfate	3.108	796099

9/2/09



00714

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\901_047.dxd
Method File Name : ...\500-081409.met
Date Time Collected : 9/1/09 11:32:19 PM

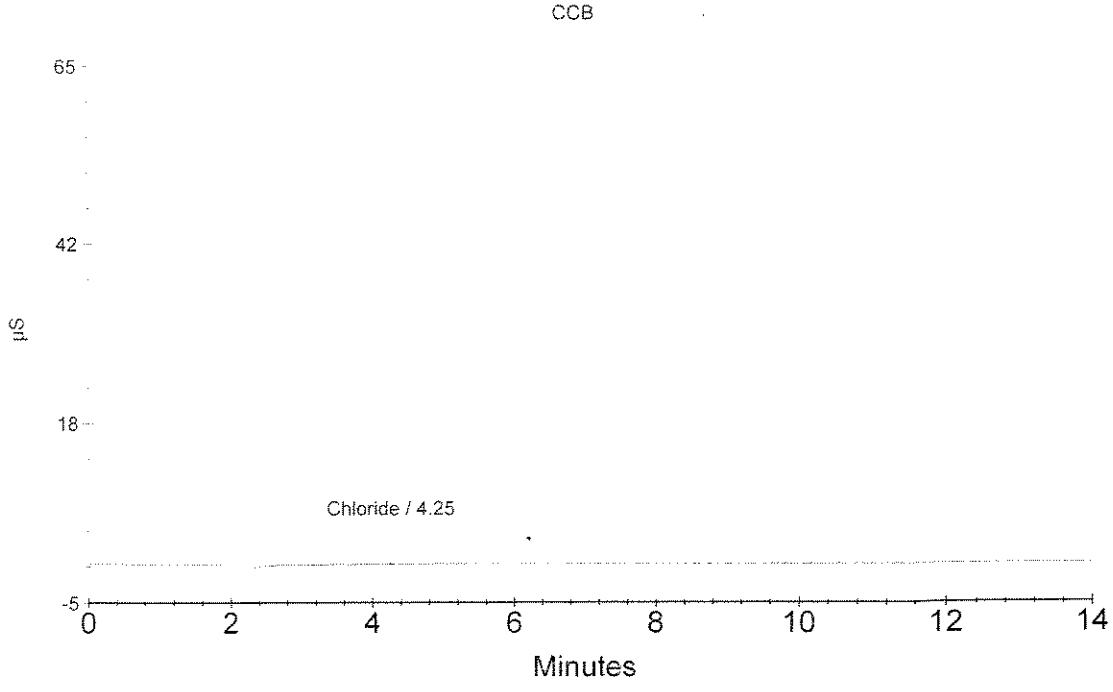
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	4.25	Chloride	0.143	4359



Ion Chromatography Cover Sheet

Instrument: Dionex DX-500 Ion Chromatogram

Column: Dionex AS-14/AG-14, 08/04/09 – IC # 7

Curve Date: 08/14/09 **Loop size:** 50 uL

Analyst: R.Paul C.Woods **Analysis Date:** 9/1/09

Is copy of LCS attached to run? (YES) / NO

Standards Prep Dates & Log ID's:

Std Type	*Prep Date*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Intermediate	07/29/09	WC90022B		Working Calibration Stds	08/13/09	WC90022N
LCS / MS Intermediate	07/29/09	WC90023A		Working LCS/MS Standard	09/01/09	WC90068J
ICV Intermediate	07/07/09	WC90106B		Working ICV Standard	08/14/09	WC90106H
CCV Intermediate	07/07/09	WC90106B		Working CCV Standard	DAILY	WC90106H

Comments:

4

WORKING LCS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. LCS expires after 7 days.)

(MS prepared fresh daily using same volume of intermediate stock added to 100mls sample. MS not prepared volumetrically.)

Analyte	Calibration Intermediate Stock ID	Intermediate Stock Conc (mg/L)	mLs Intermediate Stock	Final Vol. mLs	Final Conc. (mg/L)	Analyst	Date Prepped	Lot ID	Exp. Date	Final Log ID
F	~~WC900223A~~	50	2.0	100	1.0	CS	8/19/09	A	8/26/09	WC900685 A *
Cl	WC900223A CS 8/19/09	100			2.0	RP	8/20/09	B	8/27/09	WC900685B
NO2		50			1.0	RP	8/21/09	C	8/28/09	WC900685C
Br		50			1.0	CS	8/20/09	D	8/27/09	WC900685 D +
NO3		50			1.0	RP	8/21/09	E	8/28/09	WC900685E
OPO4		50			1.0	RP	8/24/09	F	8/31/09	WC900685 F
SO4		100			2.0	RP	8/25/09	G	9/1/09	WC900685G
						RP	8/27/09	H	9/3/09	WC900685 H
						RP	8/31/09	I	9/7/09	WC900685 I
						RP	9/1/09	J	9/8/09	WC900685J
						RP	9/2/09	K	9/9/09	WC900685K
								L		
								M		
								N		
								O		
								P		
								Q		
								R		

* Prepped in 0.01 N NaOH

+ Prepped in 0.01 N H_2SO_4

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 1
Sample Type : Calibration Update
Data File Name : ...\814_001.DXD
Method File Name : ...\500-081409.met

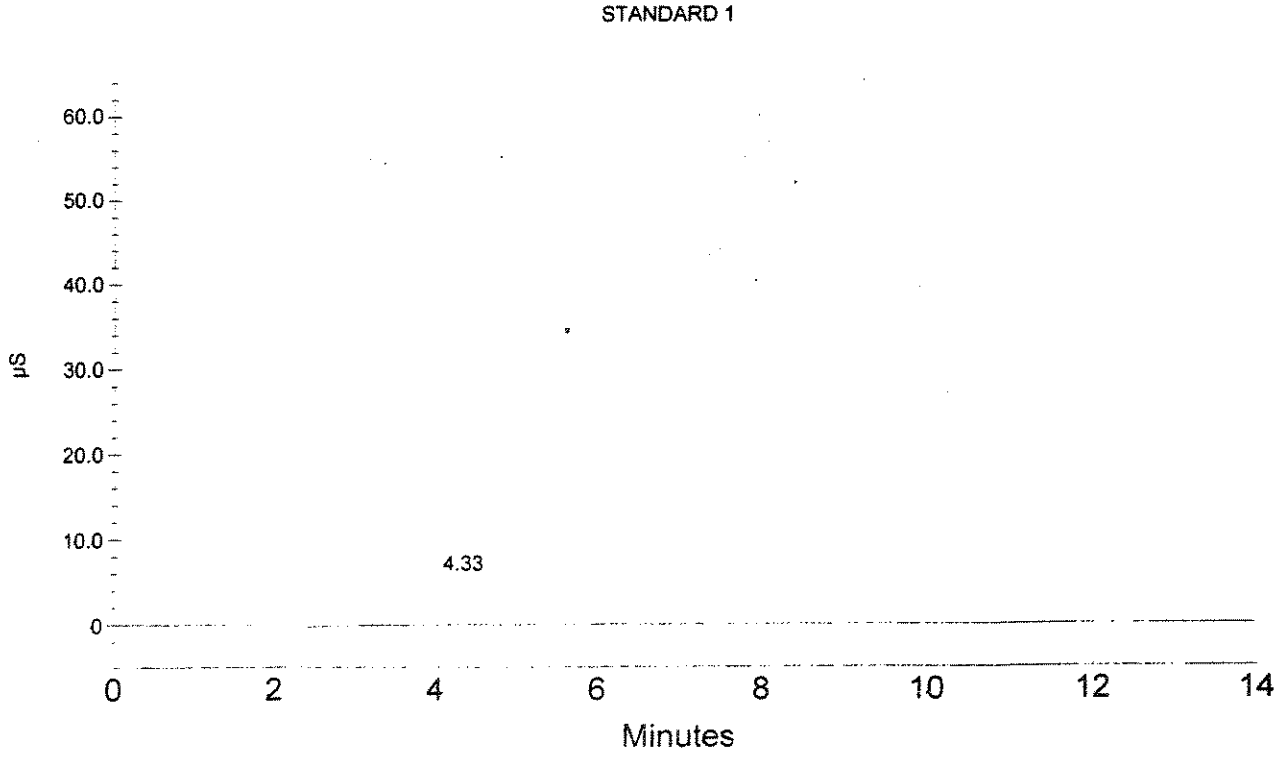
Date Time Collected : 8/14/09 2:53:55 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 1

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area	Cal Response Previous
1	4.33	Chloride	OK CS 8/17/09	0.00	2423	5187.00



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 2
Sample Type : Calibration Update
Data File Name : ...\814_002.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 3:10:15 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

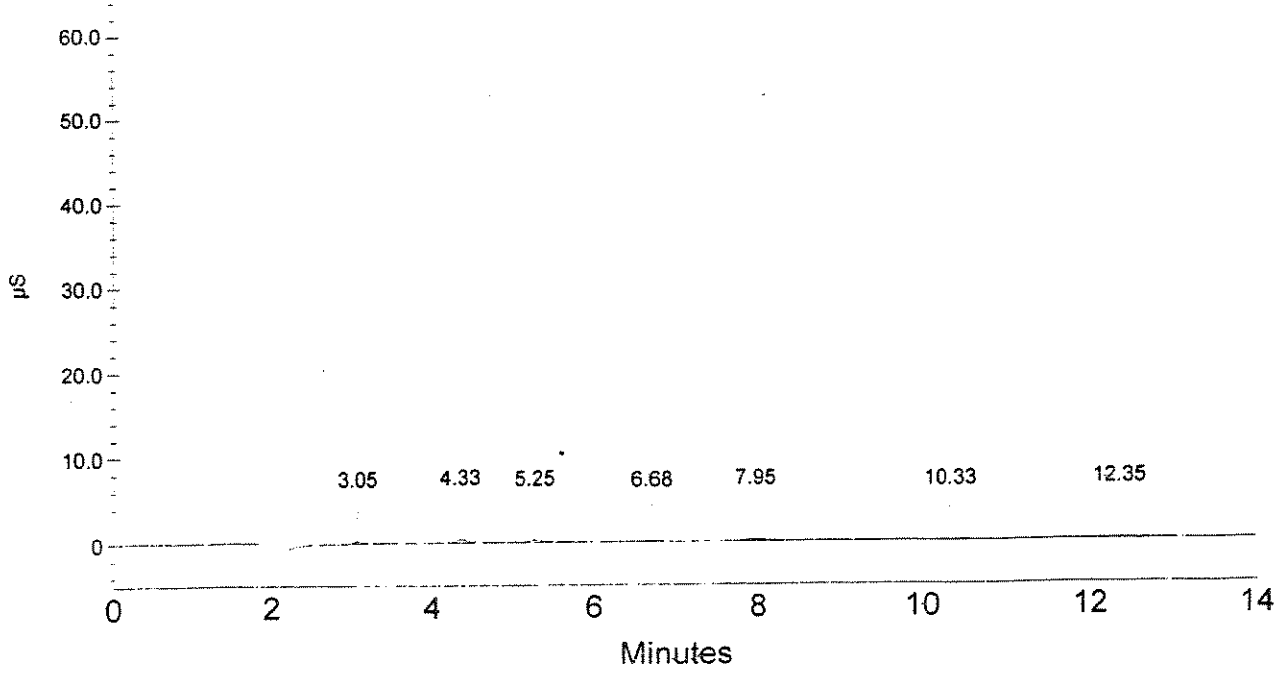
Calibration Type : EXTERNAL
Calibration Level : 2

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area	Cal Response Previous
1	3.05	Fluoride	OK	0.05	17309	20066.30
2	4.33	Chloride		0.10	39123	38492.20
3	5.25	Nitrite		0.05	31194	33238.30
4	6.68	Bromide		0.05	4943	5381.20
5	7.95	Nitrate		0.05	36985	41383.60
6	10.33	Phosphate		0.05	12985	14127.80
7	12.35	Sulfate		0.10	26730	29424.80

CS
8/17/09

STANDARD 2



00719

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 3
Sample Type : Calibration Update
Data File Name : ...\814_003.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 3:26:39 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

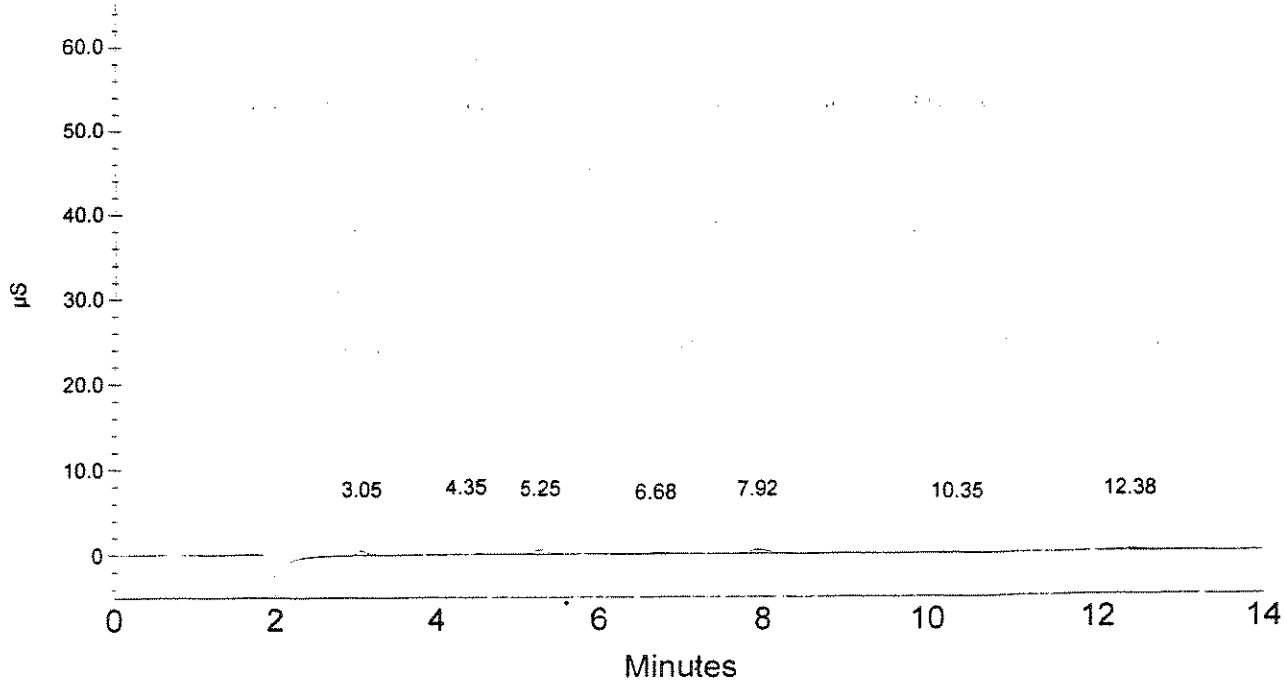
Calibration Type : EXTERNAL
Calibration Level : 3

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	3.05	Fluoride	OK 0.10	38516	43063.20
2	4.35	Chloride	0.20	70727	75511.00
3	5.25	Nitrite	0.10	64197	68969.00
4	6.68	Bromide	0.10	11326	12354.00
5	7.92	Nitrate	0.10	79330	82558.40
6	10.35	Phosphate	0.10	26424	29548.60
7	12.38	Sulfate	0.20	49544	56999.00

CS
8/14/09

STANDARD 3



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 4
Sample Type : Calibration Update
Data File Name : ...\814_004.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 3:42:57 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

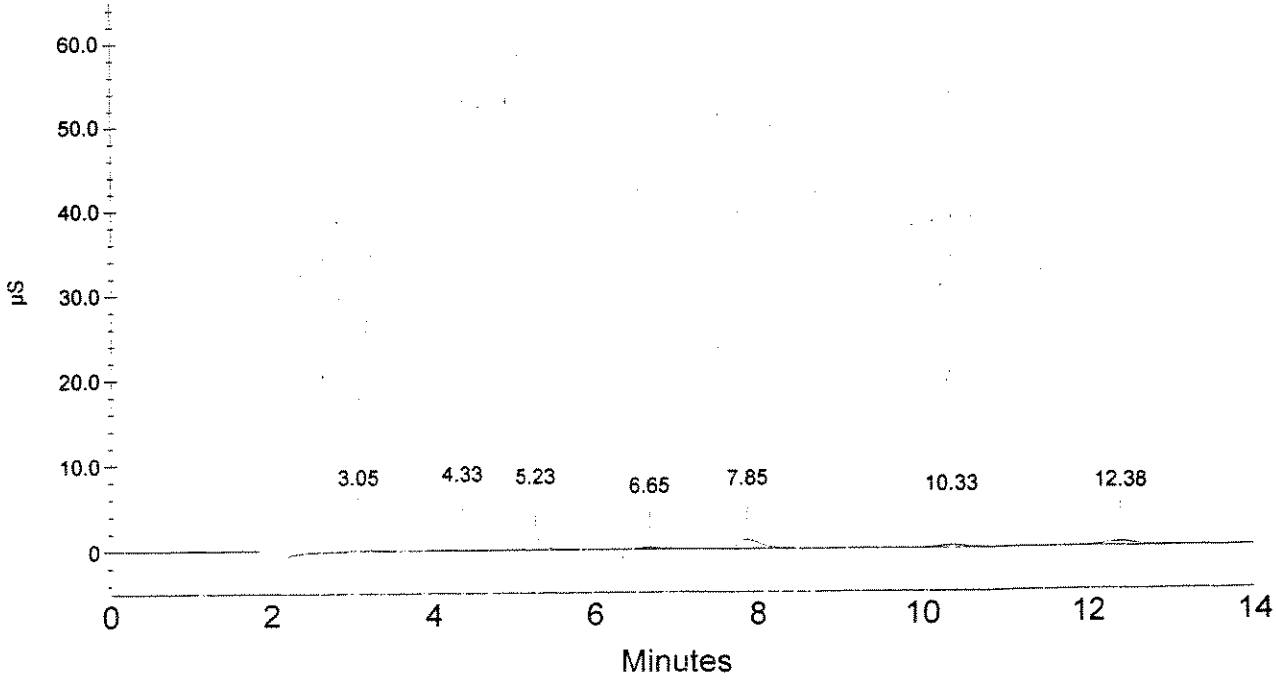
Calibration Type : EXTERNAL
Calibration Level : 4

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	3.05	Fluoride	OK 0.25	110476	126323.40
2	4.33	Chloride	0.50	166619	179770.80
3	5.23	Nitrite	0.25	163181	179470.60
4	6.65	Bromide	0.25	32449	34153.80
5	7.85	Nitrate	0.25	193149	210907.20
6	10.33	Phosphate	0.25	68686	77494.60
7	12.38	Sulfate	0.50	120086	130869.20

CS
8/17/09

STANDARD 4



00721

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 5
Sample Type : Calibration Update
Data File Name : ...\814_005.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 3:59:19 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

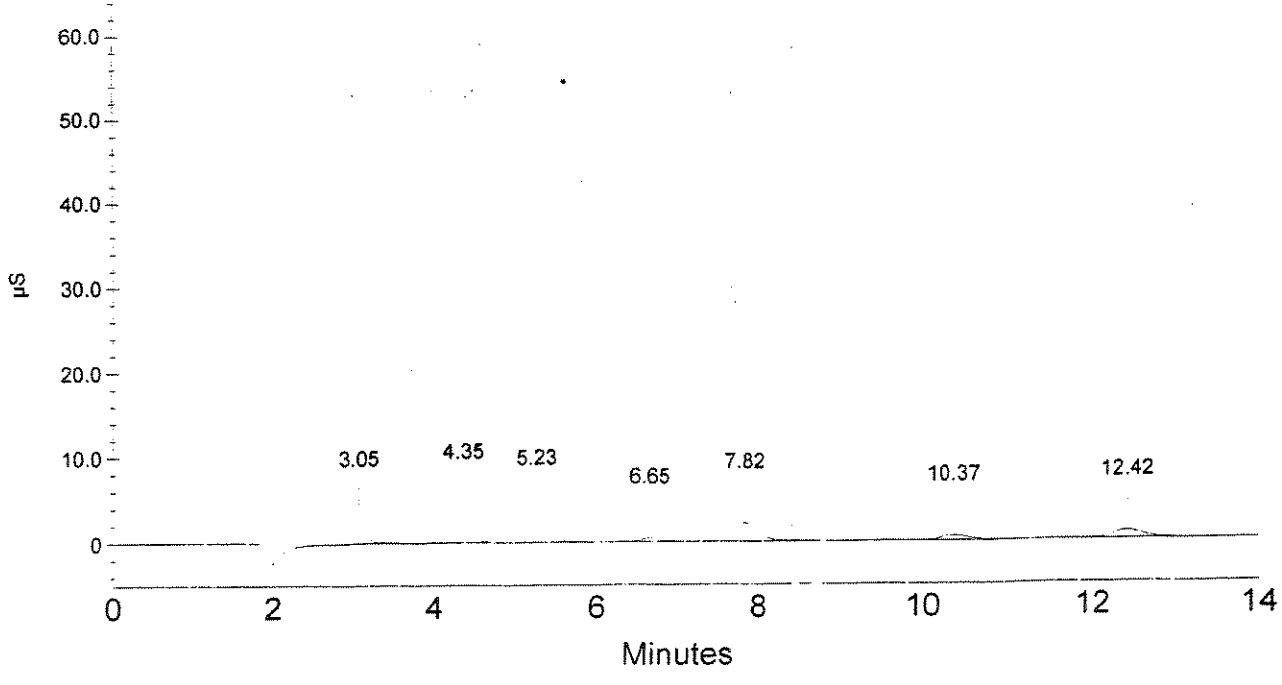
Calibration Type : EXTERNAL
Calibration Level : 5

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	3.05	Fluoride	OK 0.50	227558	265629.40
2	4.35	Chloride	1.00	327002	358797.40
3	5.23	Nitrite	0.50	324871	361323.80
4	6.65	Bromide	0.50	64049	68398.20
5	7.82	Nitrate	0.50	381317	424614.00
6	10.37	Phosphate	0.50	136870	153323.00
7	12.42	Sulfate	1.00	235487	258999.00

CS
8/17/09

STANDARD 5



00722

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 6
Sample Type : Calibration Update
Data File Name : ...\814_006.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 4:15:38 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

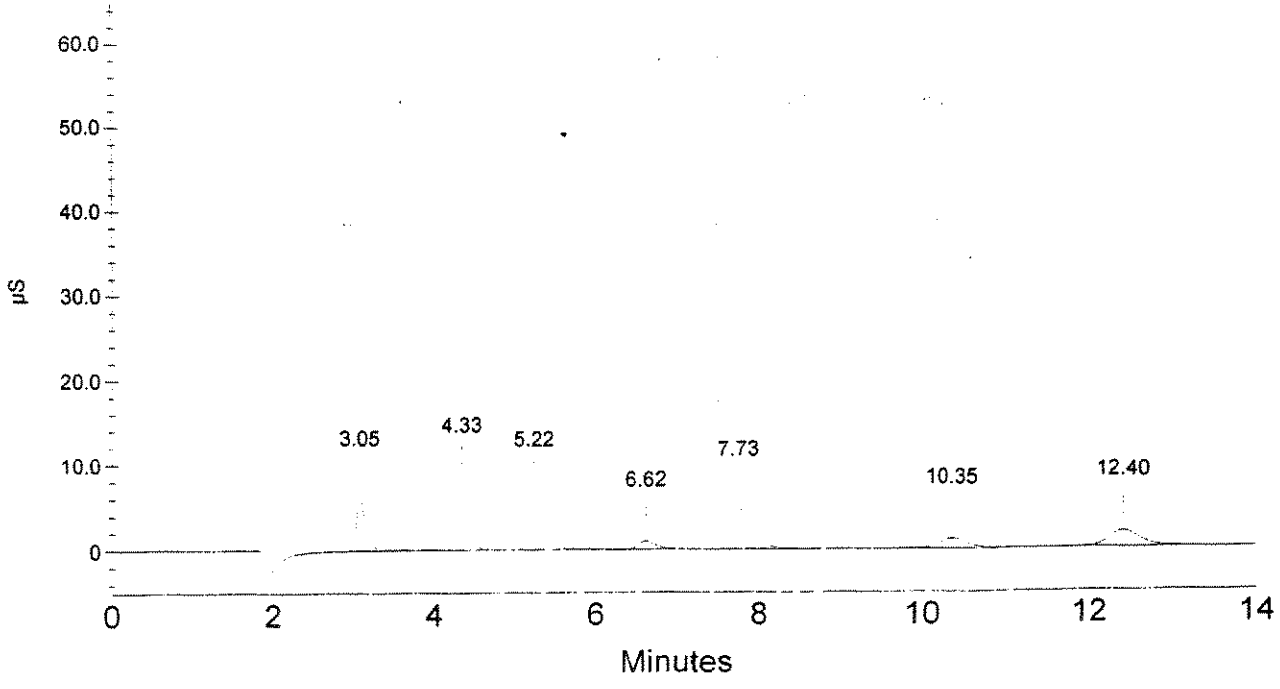
Calibration Type : EXTERNAL
Calibration Level : 6

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area	Cal Response Previous
1	3.05	Fluoride	OK	1.00	481319	553205.60
2	4.33	Chloride		2.00	699563	758620.70
3	5.22	Nitrite		1.00	690503	765262.80
4	6.62	Bromide		1.00	134278	147578.60
5	7.73	Nitrate		1.00	799793	894054.10
6	10.35	Phosphate		1.00	279693	314766.80
7	12.40	Sulfate		2.00	487217	528861.60

CS
8/17/09

STANDARD 6



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 7
Sample Type : Calibration Update
Data File Name : ...\814_007.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 4:31:56 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

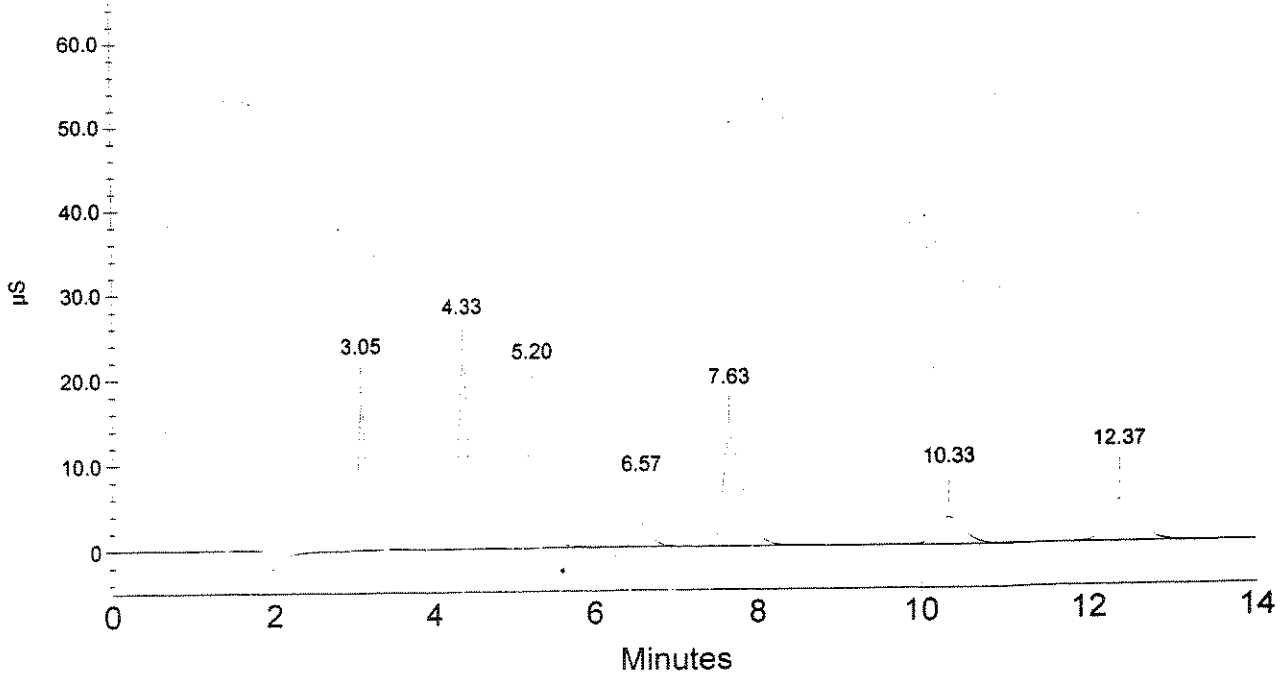
Calibration Type : EXTERNAL
Calibration Level : 7

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	3.05	Fluoride	ok 2.50	1321955	1490659.00
2	4.33	Chloride	5.00	1910984	2127914.10
3	5.20	Nitrite	2.50	1873516	2074391.60
4	6.57	Bromide	2.50	349732	388538.60
5	7.63	Nitrate	2.50	2209140	2479957.20
6	10.33	Phosphate	2.50	745033	832328.90
7	12.37	Sulfate	5.00	1254642	1393257.20

CS
8/17/09

STANDARD 7



00724

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 8
Sample Type : Calibration Update
Data File Name : ...\814_008.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 4:48:12 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

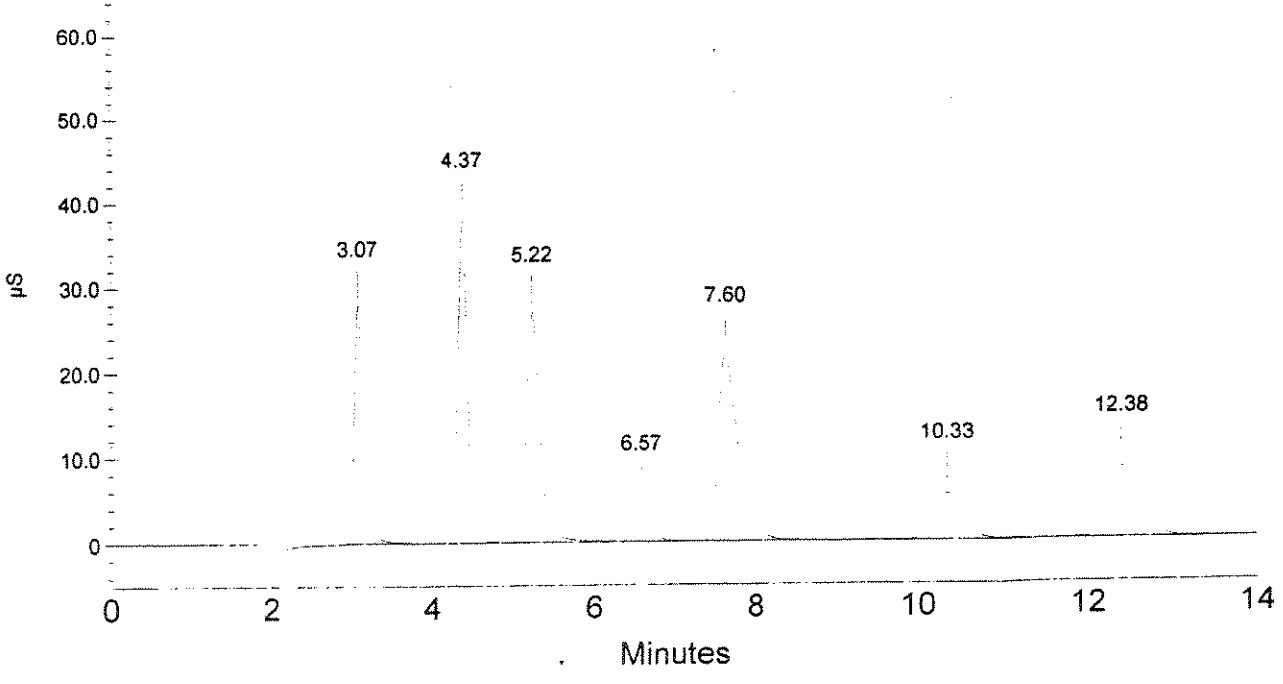
Calibration Type : EXTERNAL
Calibration Level : 8

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area	Cal Response Previous
1	3.07	Fluoride	OK	4.00	2204149	2457047.00
2	4.37	Chloride		8.00	3277517	3639116.30
3	5.22	Nitrite		4.00	3118173	3432778.40
4	6.57	Bromide		4.00	576581	637868.10
5	7.60	Nitrate		4.00	3775471	4185994.40
6	10.33	Phosphate		4.00	1240704	1379109.20
7	12.38	Sulfate		8.00	2076943	2299208.20

CS
8/17/09

STANDARD 8



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 9
Sample Type : Calibration Update
Data File Name : ...\814_009.DXD
Method File Name : ...\500-081409.met

Date Time Collected : 8/14/09 5:04:29 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

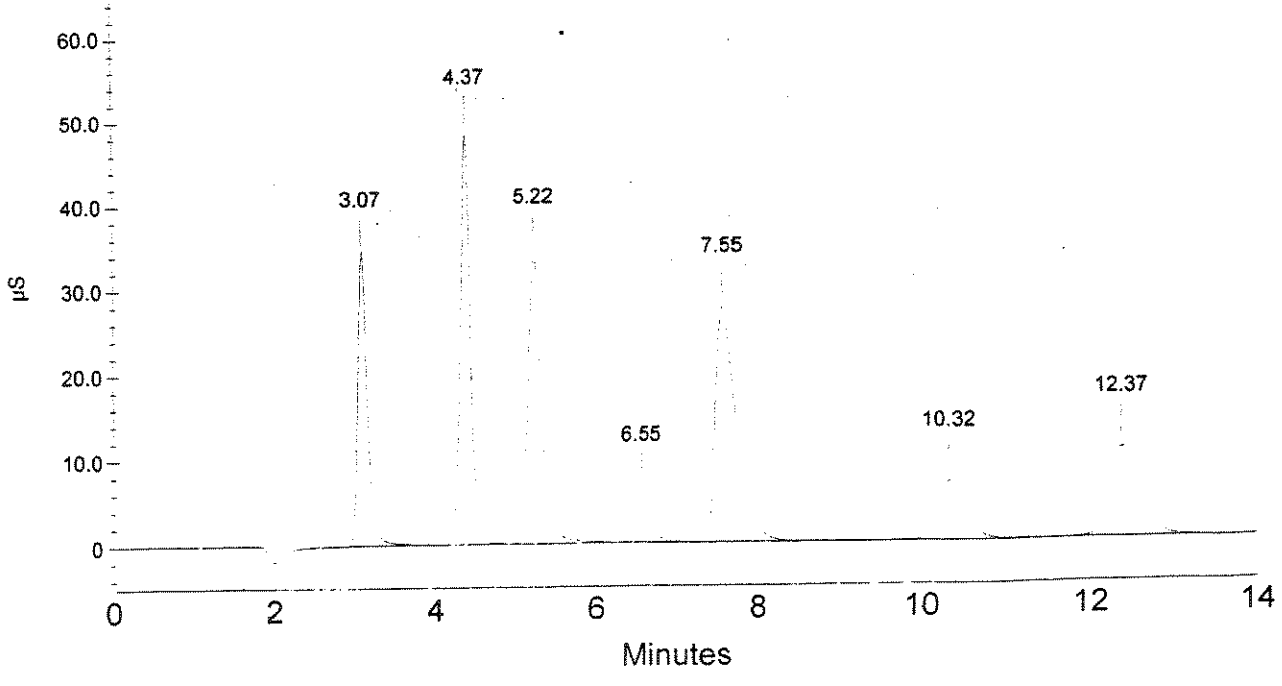
Calibration Type : EXTERNAL
Calibration Level : 9

Peak Information : Found Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	3.07	Fluoride	OK 5.00	2761528	3098311.20
2	4.37	Chloride	10.00	4188132	4706245.00
3	5.22	Nitrite	5.00	3918989	4351780.10
4	6.55	Bromide	5.00	727151	808893.00
5	7.55	Nitrate	5.00	4845762	5416316.90
6	10.32	Phosphate	5.00	1573421	1767073.00
7	12.37	Sulfate	10.00	2625297	2939428.90

CS
8/17/09

STANDARD 9



00726

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICV
Data File Name : ...\814_010.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 8/14/09 5:20:47 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

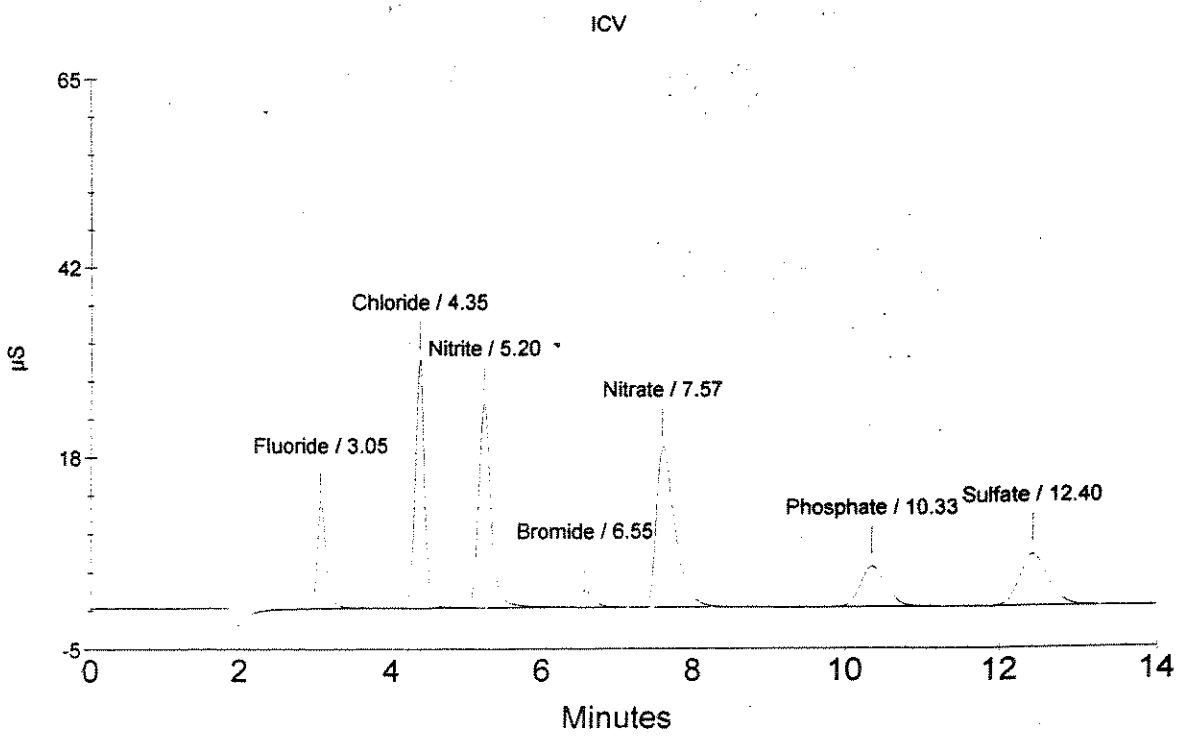
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	3.05	Fluoride	1.929	1036985
2	4.35	Chloride	6.402	2615334
3	5.20	Nitrite	3.713	2880242
4	6.55	Bromide	1.957	278712
5	7.57	Nitrate	3.585	3389727
6	10.33	Phosphate	3.698	1147293
7	12.40	Sulfate	6.193	1604694

OK
CS
8/17/09



00727

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICB
Data File Name : ...\814_011.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 8/14/09 5:37:04 PM

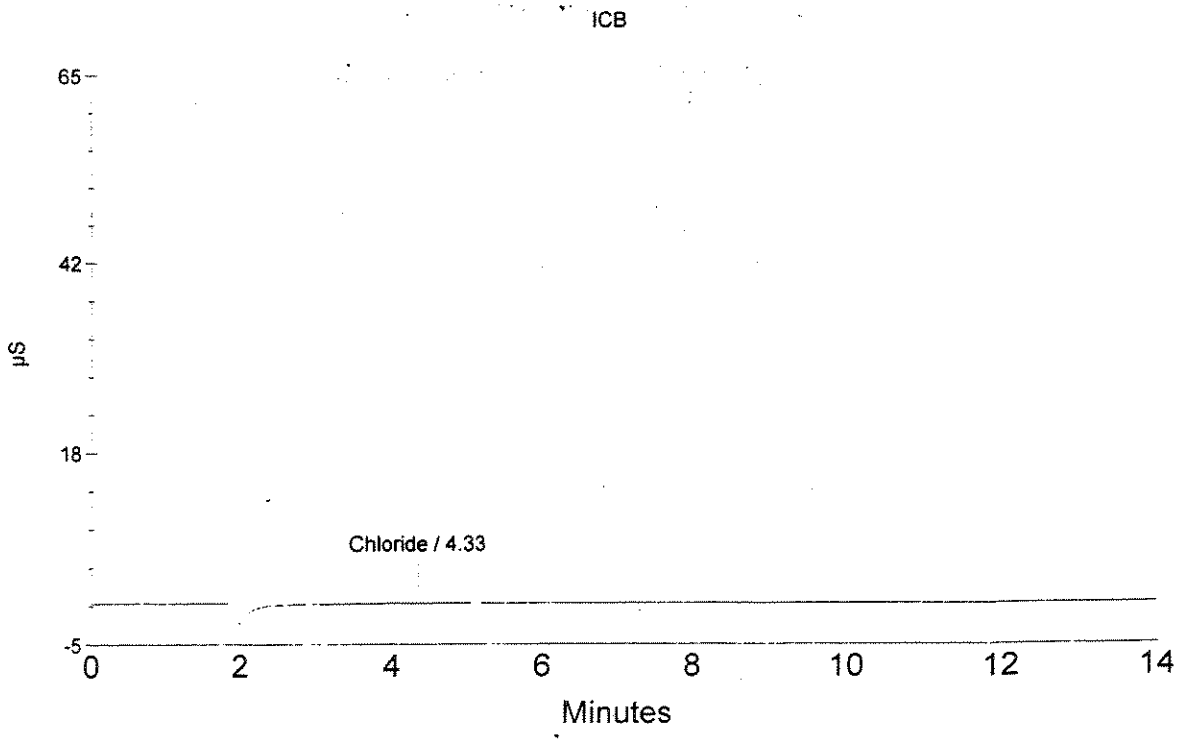
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.33	Chloride	CK CS 8/17/09	0.138	2369



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\814_012.DXD
Method File Name : ...\500-081409.met
Date Time Collected : 8/14/09 5:53:21 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

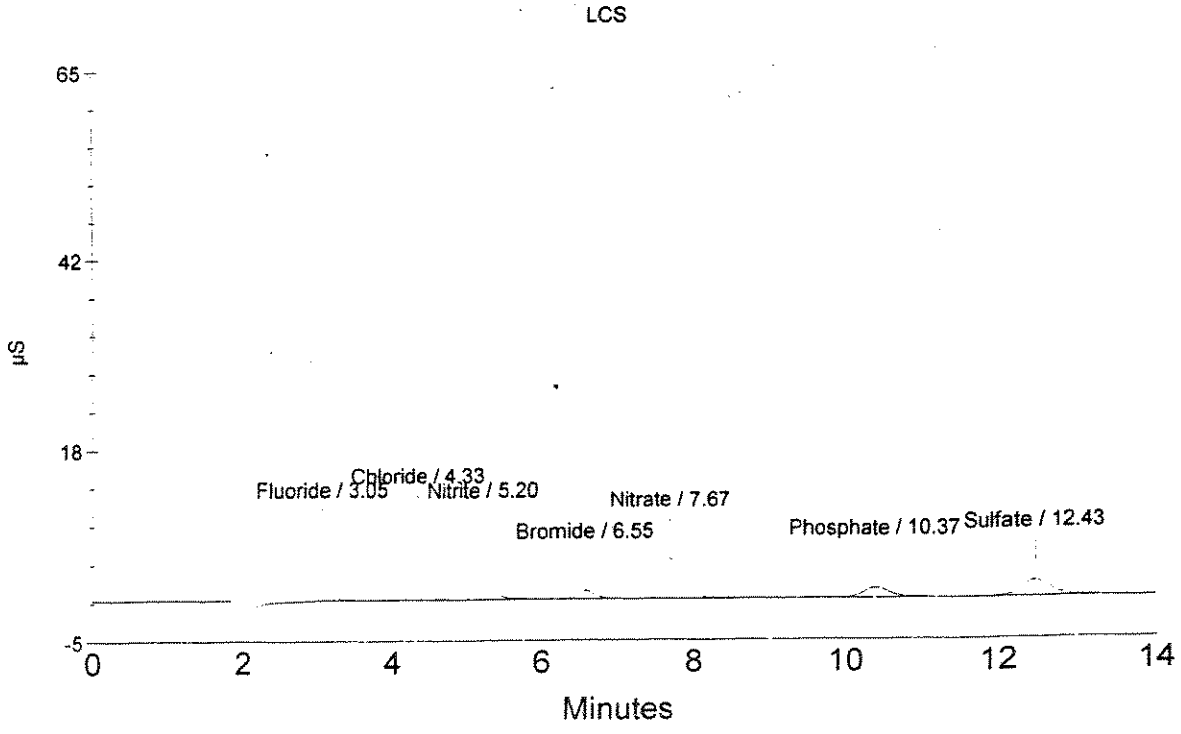
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 840.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	3.05	Fluoride	OK	0.964	498928
2	4.33	Chloride		1.837	711187
3	5.20	Nitrite		0.968	715329
4	6.55	Bromide		0.992	137919
5	7.67	Nitrate		0.943	831200
6	10.37	Phosphate		0.974	289798
7	12.43	Sulfate		1.969	497324

CS
8/17/09



Method Report - 500-081409

Method Information : All Modules

System Name : DX-500
System Number : 2
Method Type : Ion Chromatography
Column : AS-14 / AG-14
Analyst :
Comment : Dionex DX-500 Ion Chromatograph
Calibration 08.14.09

CD20 Timed Events

Module Name :
Module Serial Number :
SRS Current : 100 mA
Temperature Compensation : 1.7 (% / °C)
Cell Temperature : 35 °C

Time	Range (μS)	Offset	Mark	TTL1	TTL2	Relay1	Relay2	Collect
Init	0.010			Low	Low	Open	Open	
0.00	0.010	*		High	Low	Open	Open	
0.10	0.010			Low	Low	Open	Open	
2.20	0.010	*		Low	Low	Open	Closed	Begin

CD20 Detector Parameters

Detector Type : CD20
Data collection time (minutes) : 14.00
Data Collection Rate (Hz.) : 5.00
Real time plot scale maximum (μS) : 65.000
Real time plot scale minimum (μS) : -5.000

CD20 Integration Parameters

Peak detection algorithm : Standard
Starting peak width (seconds) : 10.00
Peak threshold : 1.000000
Peak area reject (area counts) : 1000.00
Reference peak area reject (area counts) : 1000.00

CD20 Smoothing Parameters

Filter Type : No filter

CD20 Report Data

Report Format File : J:\ACQUDATA\IC\METHOD.ACI\Ic#7\ANIONS-IC7.rpt
Print Sample Analysis : Yes
Print Calibration Update : Yes
Print Check Standard : Yes
System Suitability Tests :
No system suitability tests selected.

CD20 Integration Data Events

Time	Description
0.00	Force baseline at start of all peaks
1.70	Void volume treatment for this peak

CD20 Calibration Parameters

External or internal calibration : EXTERNAL
Number of replicates for calibration : 1
Rejection : Manual
Level Weighting : Equal
Sample Weight : 1.000000
Calibration standard volume : 1.000000
Default sample volume : 1.000000
Amount units :
Replace retention time : Yes
Update response : Yes
Default dilution factor : 1.000000
Default response factor for unknown peaks : 0.000000
Calculate unknowns by area or height : Area

CD20 Component Identification Table

Component	Retention	Tolerance	Reference
Fluoride	3.07 min	10.00 %	
Chloride	4.37 min	10.00 %	
Nitrite	5.22 min	10.00 %	
Bromide	6.55 min	10.00 %	
Nitrate	7.55 min	10.00 %	
Phosphate	10.32 min	10.00 %	
Sulfate	12.37 min	10.00 %	

CD20 Component Quantitation Table

Component	Retention	Low Limit	High Limit
Fluoride	3.07 min	0.05	5
Chloride	4.37 min	0.1	10
Nitrite	5.22 min	0.05	5
Bromide	6.55 min	0.05	5
Nitrate	7.55 min	0.05	5
Phosphate	10.32 min	0.1	5
Sulfate	12.37 min	0.05	10

CD20 Component Calibration Table

Component	Retention Time	Curve Fit	Origin	Cal. by	Response Component	Relative Factor
Fluoride	3.07 min	Linear	Ignore	Area	Fluoride	0.00
Chloride	4.37 min	Linear	Ignore	Area	Fluoride	0.00
Nitrite	5.22 min	Linear	Ignore	Area	Fluoride	0.00
Bromide	6.55 min	Linear	Ignore	Area	Fluoride	0.00
Nitrate	7.55 min	Linear	Ignore	Area	Fluoride	0.00
Phosphate	10.32 min	Linear	Ignore	Area	Fluoride	0.00
Sulfate	12.37 min	Linear	Ignore	Area	Fluoride	0.00

CD20 Component = Fluoride Levels Table

Retention Time : 3.07 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~1.08174e+006~~
2	0.05	17308.5
3	0.10	38516
4	0.25	110476
5	0.50	227558
6	1.00	481319
7	2.50	1.32196e+006
8	4.00	2.20415e+006
9	5.00	2.76153e+006

NO PEAK
CS
8/17/09

CD20 Component = Chloride Levels Table

Retention Time : 4.37 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	2423.2
2	0.10	39123
3	0.20	70727.1
4	0.50	166619
5	1.00	327002
6	2.00	699563
7	5.00	1.91098e+006
8	8.00	3.27752e+006
9	10.00	4.18813e+006

CD20 Component = Nitrite Levels Table

Retention Time : 5.22 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~1684.2~~ NO PEAK
2	0.05	31194.2 CS
3	0.10	64197.4 8/17/09
4	0.25	163181
5	0.50	324871
6	1.00	690503
7	2.50	1.87352e+006
8	4.00	3.11817e+006
9	5.00	3.91899e+006

CD20 Component = Bromide Levels Table

Retention Time : 6.55 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~3471.6~~ NO PEAK
2	0.05	4943.2 CS 8/17/09
3	0.10	11325.9
4	0.25	32448.9
5	0.50	64049.2
6	1.00	134278
7	2.50	349732
8	4.00	576581
9	5.00	727151

CD20 Component = Nitrate Levels Table

Retention Time : 7.55 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~6351.4~~ NO PEAK
2	0.05	36985.4 CS 8/17/09
3	0.10	79330.1
4	0.25	193149
5	0.50	381317
6	1.00	799793
7	2.50	2.20914e+006
8	4.00	3.77547e+006
9	5.00	4.84576e+006

CD20 Component = Phosphate Levels Table

Retention Time : 10.32 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~3.6675e+006~~ NO PEAK
2	0.05	12985.1 CS 8/17/09
3	0.10	26423.8
4	0.25	68685.6
5	0.50	136870
6	1.00	279693
7	2.50	745033
8	4.00	1.2407e+006
9	5.00	1.57342e+006

CD20 Component = Sulfate Levels Table

Retention Time : 12.37 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~16670.8~~ NO PEAK
2	0.10	26729.6 CS
3	0.20	49544 8/17/09
4	0.50	120086
5	1.00	235487
6	2.00	487217
7	5.00	1.25464e+006
8	8.00	2.07694e+006
9	10.00	2.6253e+006

CD20 XY Data Parameters

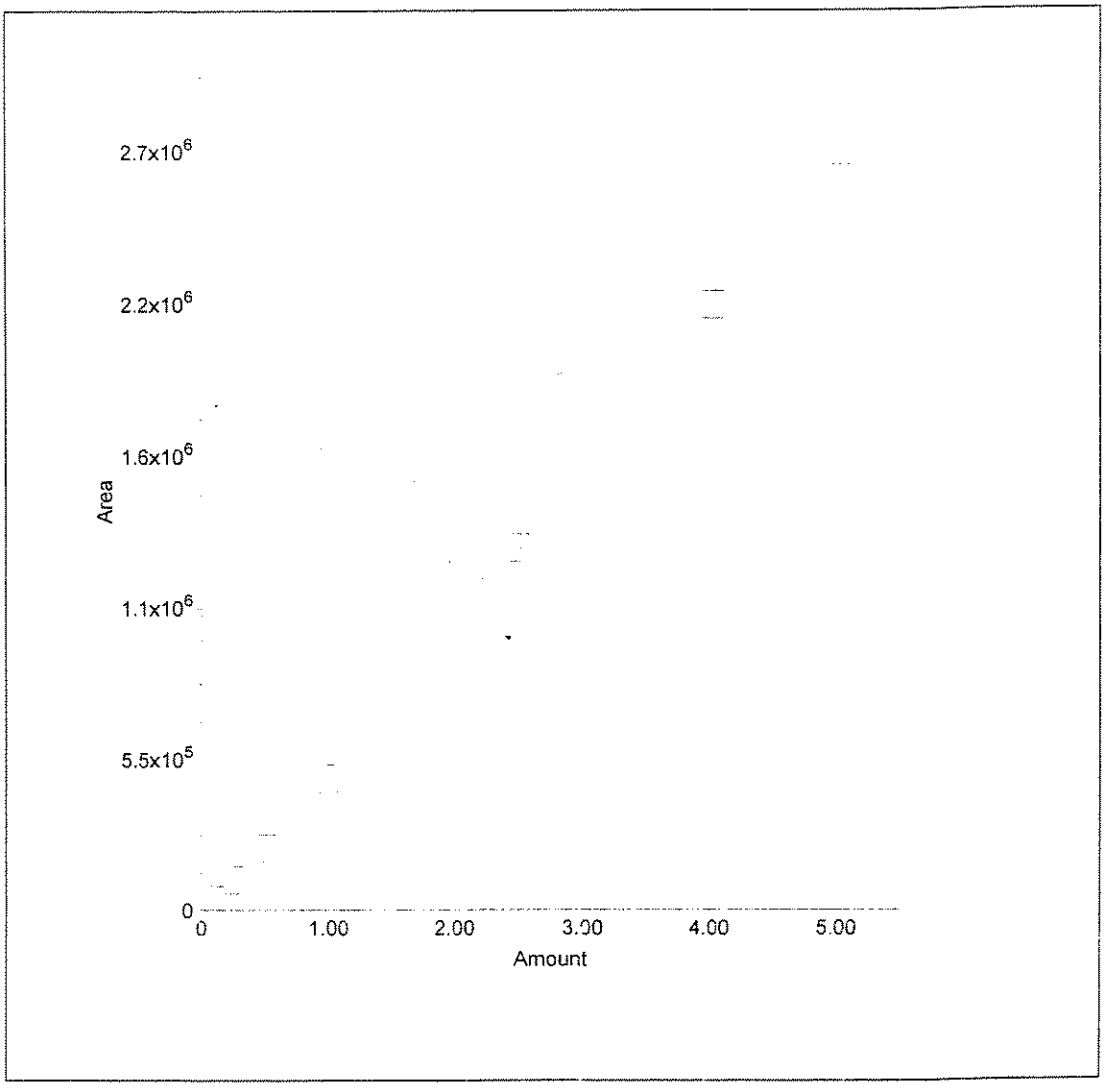
GP50 Timed Events

Module Name :
Module Serial Number :
Description :
High Pressure Limit : 3000.0
Low Pressure Limit : 0.0
Eluent A :
Eluent B :
Eluent C :
Eluent D :
Piston Size : Standard
Pressure Unit : psi
Oven Not Installed

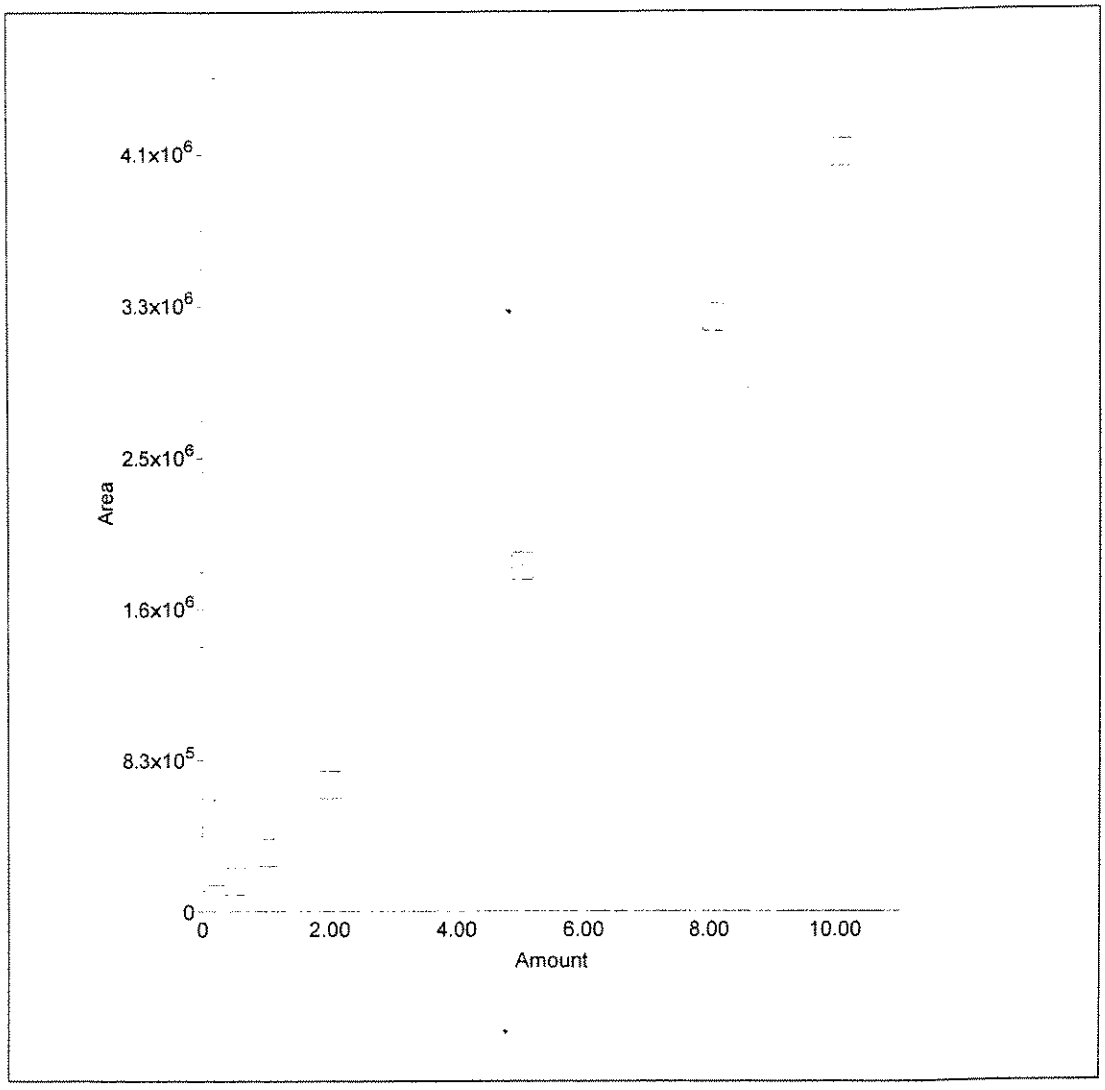
Time	Flow	%A	%B	%C	%D	Curve	Comment
Init	1.20	0.00	0.00	100.00	0.00	5	
0.00	1.20	0.00	0.00	100.00	0.00	5	
2.20	1.20	0.00	0.00	100.00	0.00	5	

Time	Valve	Column	TTL1	TTL2	Relay1	Relay2
Init	Load	A	Low	Low	Open	Open
0.00	Load	A	Low	Low	Open	Open
2.20	Inject	A	Low	Low	Open	Open

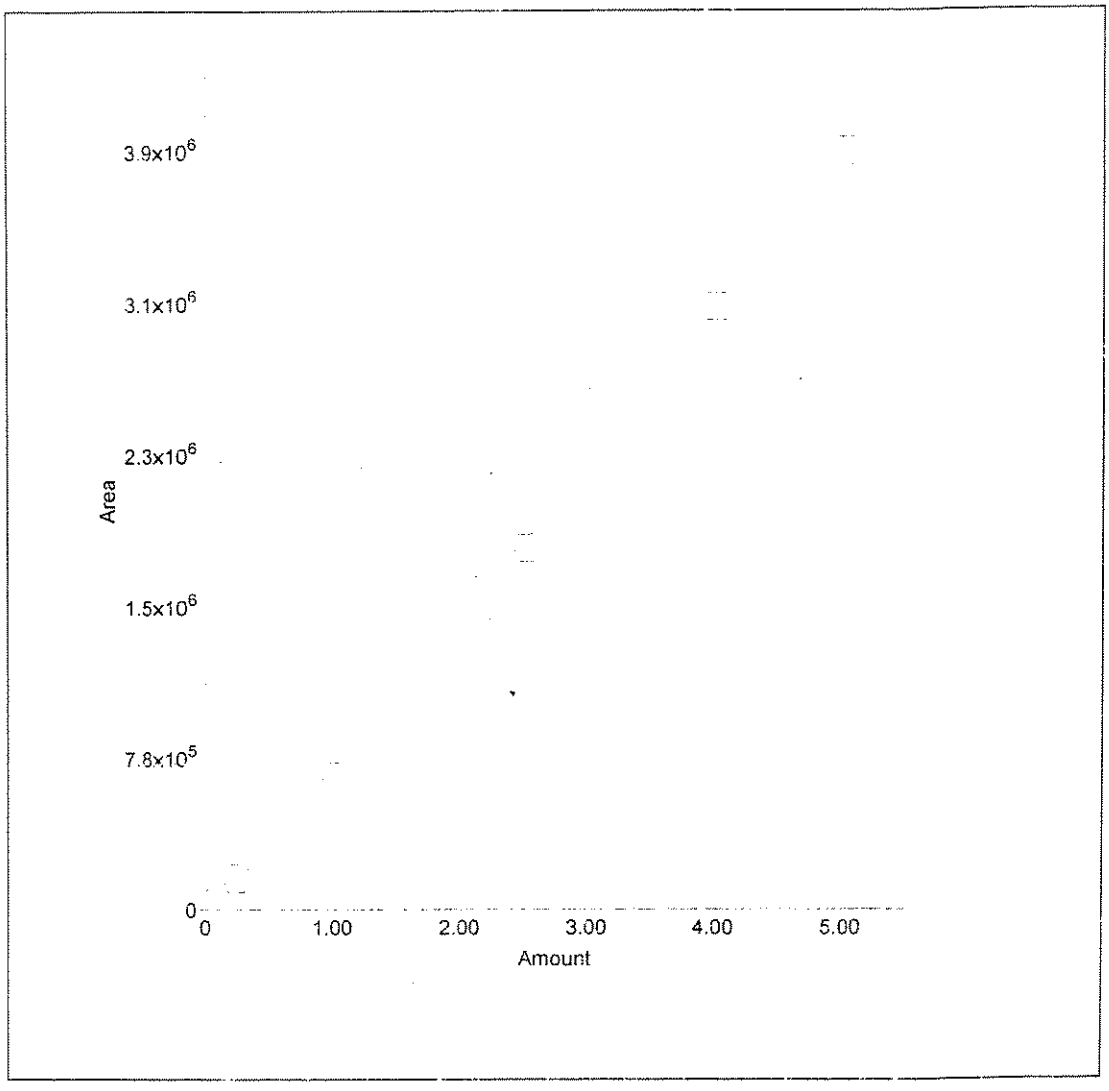
1. Component:Fluoride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999467
Amt=1.794e-006*Resp+0.06889



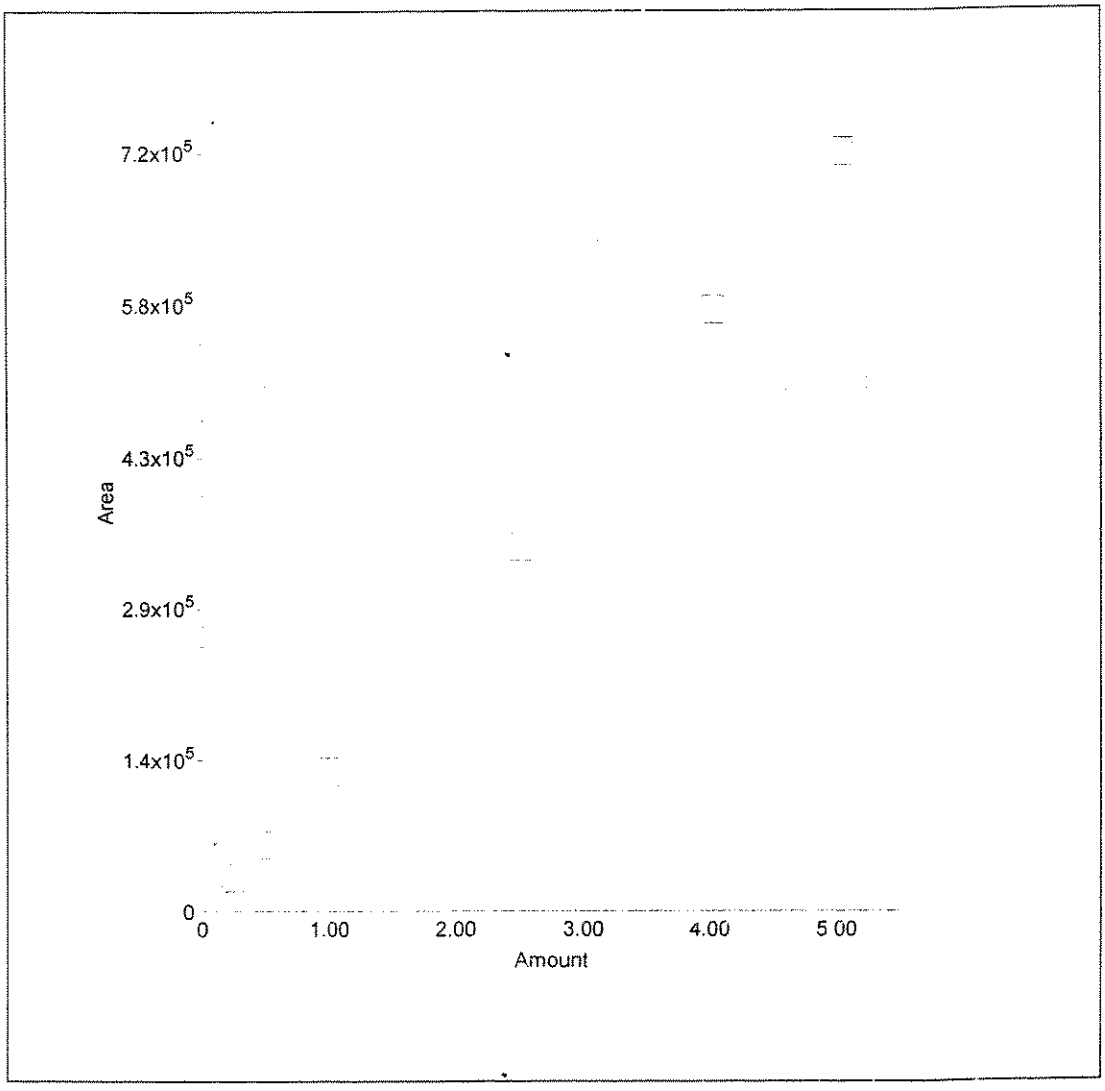
2. Component:Chloride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998239
Amt=2.397e-006*Resp+0.1324



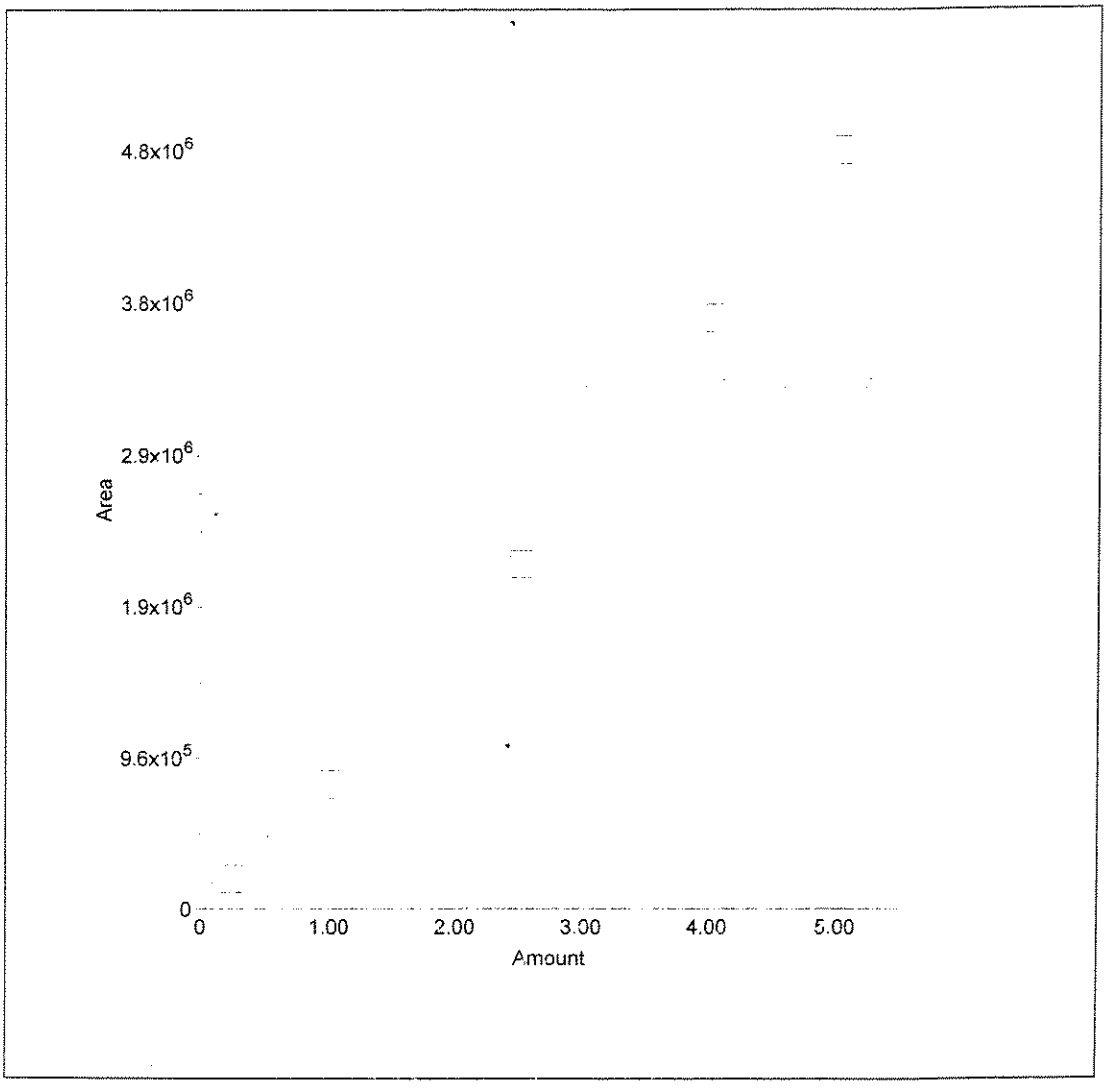
3. Component:Nitrite
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999442
Amt=1.268e-006*Resp+0.06059,



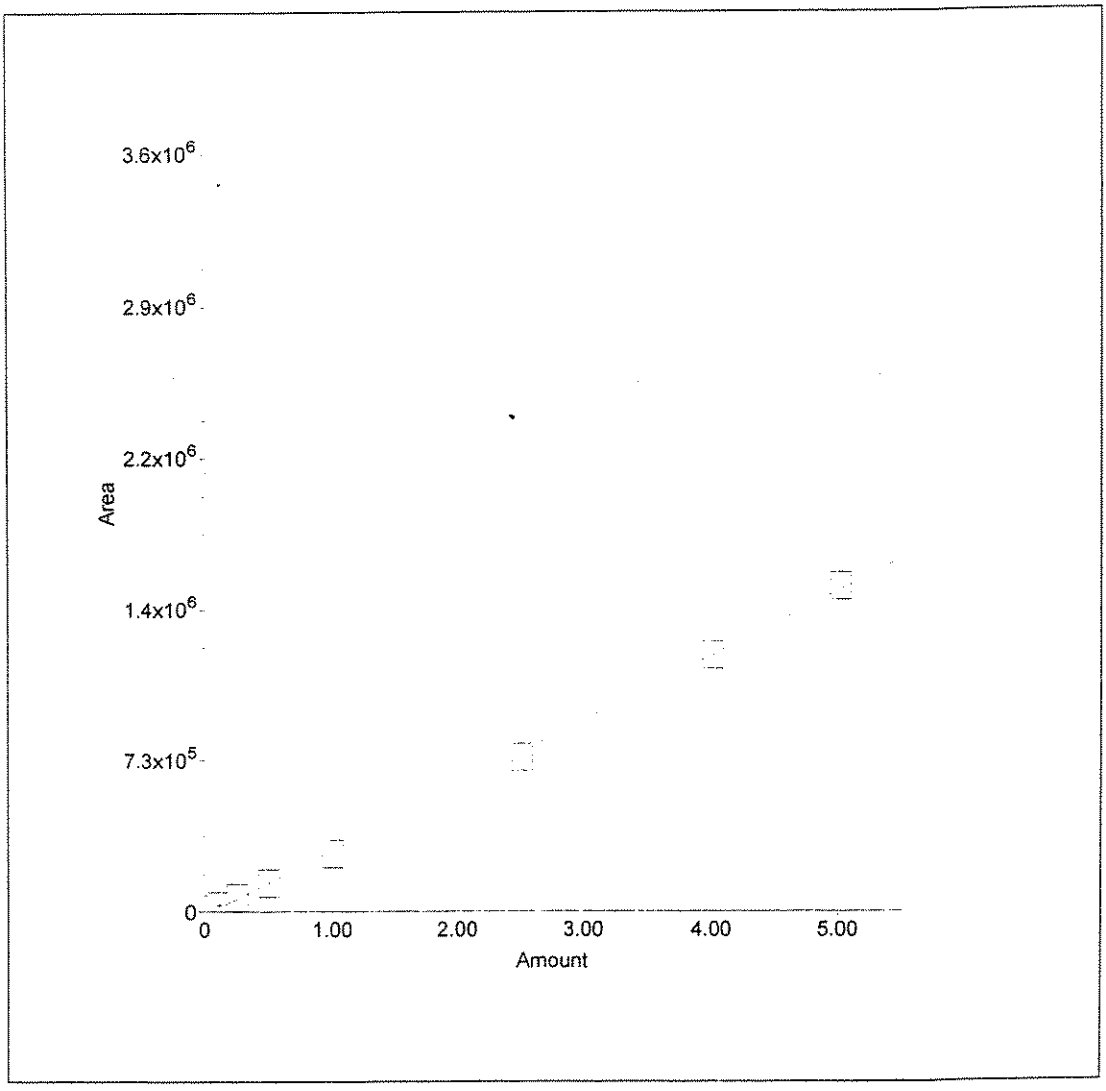
4. Component:Bromide
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999722
Amt=6.858e-006*Resp+0.04569



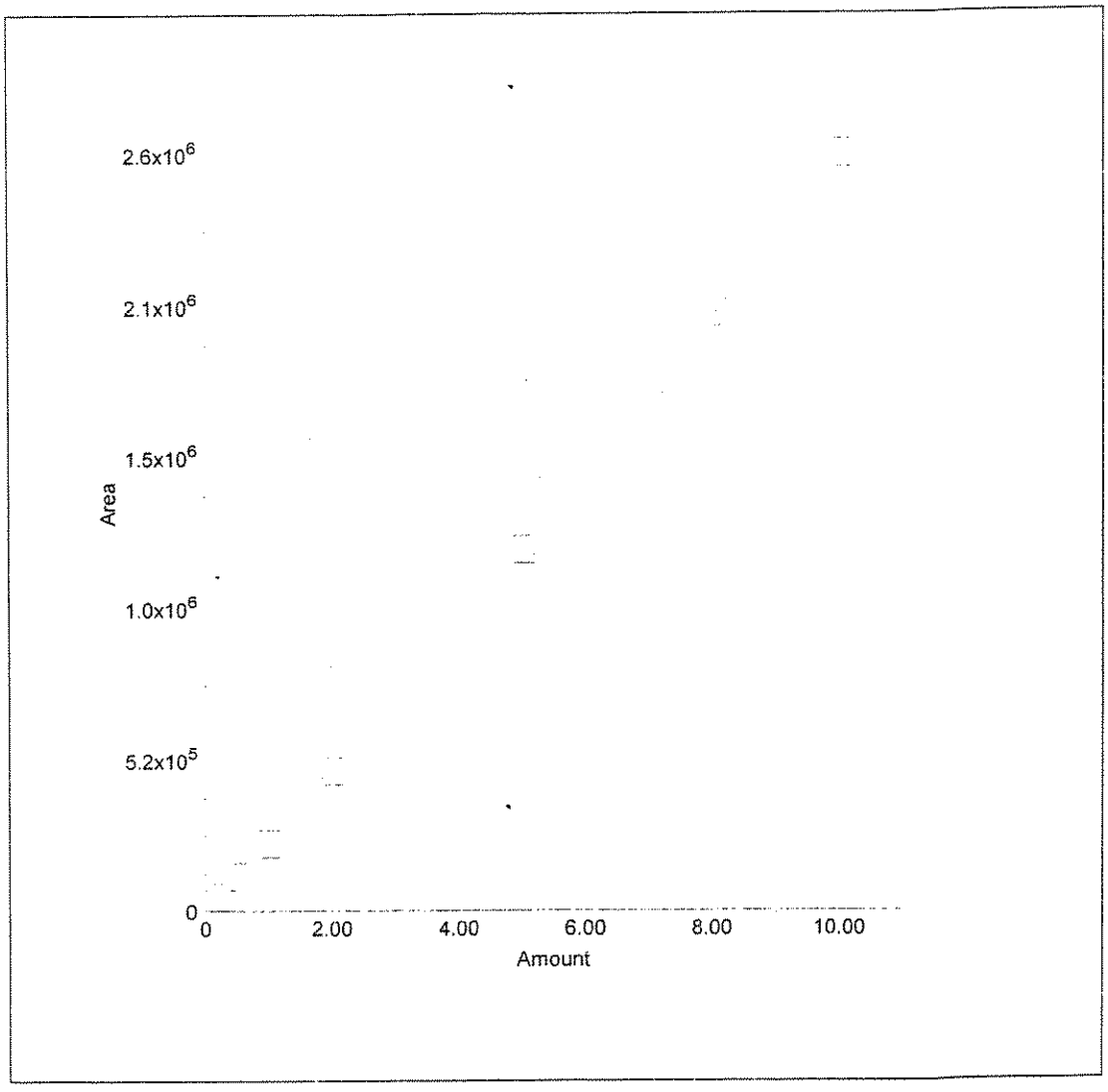
5. Component:Nitrate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998260
Amt=1.032e-006*Resp+0.08489



6. Component:Phosphate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999371
Amt=3.177e-006*Resp+0.05344



7. Component:Sulfate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999584
Amt=3.814e-006*Resp+0.07153



Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex DX-500 Ion Chromatogram

Column: Dionex AS-14/AG-14, 08/04/09 – IC # 7

Curve Date: 08/14/09 **Loop size:** 50 uL

Analyst: CS **Analysis Date:** 8/14/09

Is copy of LCS attached to run? (YES) / NO

Standards Prep Dates & Log ID's:

Std Type	*Prep Date*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Intermediate	07/29/09	WC90022B		Working Calibration Stds	08/13/09	WC90022N
LCS / MS Intermediate	07/29/09	WC90022B		Working LCS/MS Standard	08/18/09	WC90067L
ICV Intermediate	07/07/09	WC90105D		Working ICV Standard	08/14/09	WC90105H
CCV Intermediate	07/07/09	WC90105D		Working CCV Standard	DAILY	WC90105H

Comments:

CALIBRATION INTERMEDIATE STOCK PREP
(used for Calibration and LCS / MS)

Analyte	1000ppm Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date	Final Calibration Intermediate Stock ID
F	WC851030	1000	10	200	50	RP	7/10/09	A	8/3/09	WC90022A
Cl	WC720018	1000	20		100	RP	7/29/09	B	8/31/09	WC900223
NO2	WC720028	1000	10		50			C		
Br	WC850125	1000	10		50			D		
NO3	WC720010	1000	10		50			E		
OPO4	WC720029	1000	10		50			F		
SO4	WC720020	1000	20		100	CS	8/17/09	G		

WORKING CALIBRATION STANDARDS PREP
(Stocks delivered using Volumetric glassware and brought to volume with DI. Expire after 7 days.)

Std #	Calibration Intermediate Stock ID	mLs Intermediate Stock	Final Vol. mLs	Final Std Conc. F	Cl	NO2	Br	NO3	OPO4	SO4
9		10.0	100	5.0	10.0	5.0	5.0	5.0	5.0	10.0
8		8.0		4.0	8.0	4.0	4.0	4.0	4.0	8.0
7		2.5	50	2.5	5.0	2.5	2.5	2.5	2.5	5.0
6		2.0		1.0	2.0	1.0	1.0	1.0	1.0	2.0
5		1.0		0.5	1.0	0.50	0.50	0.50	0.50	1.0
4		0.5		0.25	0.50	0.25	0.25	0.25	0.25	0.50
3		0.2		0.10	0.20	0.10	0.10	0.10	0.10	0.20
2		0.1		0.05	0.10	0.05	0.05	0.05	0.05	0.10
1		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Analyst	Date Prepped	Lot ID	Exp. Date	Final Log ID
RP	7/1/09	H	7/7/09	WC900224
CS	7/15/09	I	7/22/09	WC900221
* CS	7/17/09	J	7/24/09	WC900225
+ RP	7/20/09	K	7/27/09	WC900226
RP	7/28/09	L	[illegible]	[illegible]
CS	7/30/09	M	8/6/09	WC900227
CS	8/13/09	N	8/20/09	WC900228
CS	8/17/09	O		
		P		

*: prepped in 0.01N NaOH
+: prepped in 0.01N H_2SO_4

WORKING LCS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. LCS expires after 7 days.)

(MS prepared fresh daily using same volume of intermediate stock added to 100mls sample. MS not prepared volumetrically.)

Analyte	Calibration Intermediate Stock ID	Intermediate Stock Conc (mg/L)	mLs Intermediate Stock	Final Vol. mLs	Final Conc. (mg/L)	Analyst	Date Prepped	Lot ID	Exp. Date	Final Log ID
F	WC900223	50	2.0	100	1.0	RP	7/29/09	A	8/5/09	WC900677A
Cl		100			2.0	RP	8/3/09	B	8/10/09	WC900677B
NO2		50			1.0	RP	8/5/09	C	8/12/09	WC900677C
Br		50			1.0	RP	8/6/09	D	8/13/09	WC900677D
NO3		50			1.0	CS	8/7/09	E	8/14/09	WC900677E
OPO4		50			1.0	RP	8/10/09	F	8/17/09	WC900677F
SO4		100			2.0	RP	8/11/09	G	8/18/09	WC900677G
						RP	8/12/09	H	8/19/09	WC900677H
						CS	8/13/07	I	8/20/09	WC900677I
						CS	8/14/09	J	8/21/09	WC900677J
								K		
								L		
								M		
								N		
								O		
							8/17/09	P		
						CS		Q		
								R		

ICV / CCV INTERMEDIATE STOCK PREP

Analyte	ICV / CCV Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL
F	WC85284I	1000	4.0	1000
Cl	WC72006E	650	20.0	
NO2	WC72007G	180	40.0	
Br	WC85037D	1000	4.0	
NO3	WC9005H	180	40.0	
OPO4	WC72007S	180	40.0	
SO4	WC72007H	3200	4.0	

Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date	Final ICV /CCV Intermediate Stock ID
4.0	CS	5/26/09	A	9/10/09	WC900105A
13.0	RP	5/5/09	B	9/10/09	~~WC900105~~ WC900105B
7.2	RP	6/8/09	C	9/10/09	WC90105C
4.0	RP	7/7/09	D	9/10/09	WC90105D
7.2			E		
7.2			F		
12.8	CS	8/17/09	G		

WORKING ICV / CCV PREP

(A 1:2 dilution of the Reference Intermediate Stock is done daily)

Analyte	ICV / CCV Intermediate Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Final Working ICV / CCV ID
F	WC900105	4.0	5.0	~~20.0~~ 10.0	~~1.0~~ 2.0		*DAILY*	H	WC900105H
Cl		13.0			~~3.25~~ 6.50			I - WC900105I +	
NO2		7.2			3.6				
Br		4.0			2.0			J - WC90105J *	
NO3		7.2			3.6				
OPO4		7.2			3.6				
SO4		12.8			6.4				

CC 10/1.68

CC 10/1.68

+ made in C.01N H_2SO_4

* made in 0.01N NaOH

Analytical Results Summary

Instrument Name: R-UV-VIS-01 **Analyst:** DWARD **Analysis Lot:** 169331 **Method/Testcode:** SM 5540 C/MBAS Hendext

Lab Code	Target Analytes	QC Type	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
LQ0908039-01	Surfactants	MB		Soil	0.32 mg/L	25 g	2.0 mg/Kg U	10	2.0			9/2/09 08:47	N	IV
LQ0908312-01	Surfactants	MB		Soil	0.32 mg/L	25 g	2.0 mg/Kg U	10	2.0			9/2/09 08:47	N	IV
LQ0908312-02	Surfactants	LCS		Soil	0.20 mg/L	25 g	0.198 mg/Kg J	1	0.20	99		9/2/09 08:47	N	IV
LQ0908312-03	Surfactants	LCS		Soil	3.30 mg/L	25 g	3.30 mg/Kg	1	0.20	94		9/2/09 08:47	N	IV
L0904797-003	Surfactants	N/A		Soil	1.10 mg/L	25 g	1.2 mg/Kg J	10	2.2			9/2/09 08:47	N	IV
L0904797-004	Surfactants	N/A		Soil	1.10 mg/L	25 g	1.2 mg/Kg J	10	2.1			9/2/09 08:47	N	IV
L0904797-005	Surfactants	N/A		Soil	0.42 mg/L	25 g	2.1 mg/Kg U	10	2.1			9/2/09 08:47	N	IV
L0904797-006	Surfactants	N/A		Soil	1.30 mg/L	25 g	1.5 mg/Kg J	10	2.3			9/2/09 08:47	N	IV
L0904797-007	Surfactants	N/A		Soil	0.71 mg/L	25 g	0.8 mg/Kg J	10	2.2			9/2/09 08:47	N	IV
L0904797-008	Surfactants	N/A		Soil	2.08 mg/L	25 g	2.2 mg/Kg	10	2.1			9/2/09 08:47	N	IV
LQ0908042-01	Surfactants	MB		Soil	0.00 mg/L	500 mL	0.020 mg/L U	1	0.020			9/2/09 08:47	N	IV
LQ0908312-07	Surfactants	LCS		Soil	0.02 mg/L	500 mL	0.0198 mg/L J	1	0.020	99		9/2/09 08:47:00	N	IV
LQ0908312-08	Surfactants	LCS		Soil	0.33 mg/L	500 mL	0.330 mg/L	1	0.020	94		9/2/09 08:47:00	N	IV
L0904817-001	Surfactants	N/A		Soil	0.02 mg/L	500 mL	0.017 mg/L J	1	0.020			9/2/09 08:47	N	IV
LQ0908043-01	Surfactants	MB		Soil	0.00 mg/L	500 mL	0.020 mg/L U	1	0.020			9/2/09 08:47	N	IV
L0904817-002	Surfactants	N/A		Soil	0.01 mg/L	500 mL	0.011 mg/L J	1	0.020			9/2/09 08:47	N	IV
LQ0908312-04	Surfactants	MB		Water	0.00 mg/L	500 mL	0.020 mg/L U	1	0.020			9/2/09 08:47	N	IV
LQ0908312-05	Surfactants	LCS		Water	0.02 mg/L	500 mL	0.0198 mg/L J	1	0.020	99		9/2/09 08:47	N	IV
LQ0908312-06	Surfactants	LCS		Water	0.33 mg/L	500 mL	0.330 mg/L	1	0.020	94		9/2/09 08:47	N	IV
L0904948-009	Surfactants	N/A		Water	0.07 mg/L	500 mL	0.074 mg/L	1	0.020			9/2/09 08:47	N	IV
L0904990-003	Surfactants	N/A		Water	0.01 mg/L	500 mL	0.020 mg/L U	1	0.020			9/2/09 08:47	N	I
L0904990-005	Surfactants	N/A		Water	0.01 mg/L	500 mL	0.020 mg/L U	1	0.020			9/2/09 08:47	N	I
L0904990-007	Surfactants	N/A		Water	0.01 mg/L	500 mL	0.020 mg/L U	1	0.020			9/2/09 08:47	N	I
L0904990-009	Surfactants	N/A		Water	0.03 mg/L	500 mL	0.027 mg/L	1	0.020			9/2/09 08:47	N	I

R4797
R4817
R4948
3 copies

Reviewed & Approved
By: CK
Date: 9/9/09

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Surfactants (MBAs)
Method: SM20 5540C

Analyst: DWARD
Pipette: Volumetrics

Date: 9/2/09
Time: 8:47

Calibration:

Std	Conc.	Absorb.	Result	% Rec
1	0.00	0.000	0.00323	
2	0.02	0.019	0.02175	108.7%
3	0.04	0.039	0.04124	103.1%
4	0.06	0.059	0.06074	101.2%
5	0.08	0.075	0.07633	95.4%
6	0.10	0.101	0.10168	101.7%
7	0.15	0.154	0.15334	102.2%
8	0.20	0.190	0.18843	94.2%
9	0.25	0.240	0.23717	94.9%
10	0.30	0.319	0.31418	104.7%
11	0.40	0.409	0.40191	100.5%

Curve Date: 5/28/09
C.C = 0.998342
y-int. = -0.003311
Slope: 1.025888

Working Std Stock Log I WC92074D
Working Standard Stock Prep Date: 8/31/2009
Working Ref Stock Log WC92071D
Working Reference Stock Prep Date: 8/26/2009

* Soil - 25 g diluted to 250 mLs

	Misc.	Order #	Sample Vol. (mLs)	Absorbance @ 652 nm	MBAs mg/L	Bench Dilution	Final Dilution	Final Result	*Soil
	TV= 0.300	ICV	500.000	0.320	0.3152	1.0	1.00	105.1%	
		ICB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
1	TV= 0.300	CCV	500.000	0.300	0.2957	1.0	1.00	0.2957	
2		CCB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
3	TV= 0.020	LCS-LL	500.000	0.017	0.0198	1.0	1.00	0.0198	
4	TV= 0.350	LCS-HL	500.000	0.335	0.3298	1.0	1.00	0.3298	
5	MB	RQ0908039-01	50.000	0.000	0.0032	1.0	10.00	0.3227	*
6		R0904797-003	50.000	0.008	0.0110	1.0	10.00	1.1026	*
7		R0904797-004	50.000	0.008	0.0110	1.0	10.00	1.1026	*
8		R0904797-005	50.000	0.001	0.0042	1.0	10.00	0.4202	*
9		R0904797-006	50.000	0.010	0.0130	1.0	10.00	1.2975	*
10		R0904797-007	50.000	0.004	0.0071	1.0	10.00	0.7127	*
11		R0904797-008	50.000	0.018	0.0208	1.0	10.00	2.0773	*
12	SPLPMB1	RQ0908042-01	500.000	0.000	0.0032	1.0	1.00	0.0032	
13		CCV	500.000	0.289	0.2849	1.0	1.00	0.2849	
14		CCB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
15		R0904817-001	500.000	0.014	0.0169	1.0	1.00	0.0169	
16	SPLPMB2	RQ0908043-01	500.000	0.000	0.0032	1.0	1.00	0.0032	
17		R0904817-002	500.000	0.008	0.0110	1.0	1.00	0.0110	
18		R0904948-009	500.000	0.073	0.0744	1.0	1.00	0.0744	
19		R0904990-005	500.000	0.010	0.0130	1.0	1.00	0.0130	
20		R0904990-003	500.000	0.009	0.0120	1.0	1.00	0.0120	
21		R0904990-007	500.000	0.009	0.0120	1.0	1.00	0.0120	
22		R0904990-009	500.000	0.024	0.0266	1.0	1.00	0.0266	
23		CCV	500.000	0.289	0.2849	1.0	1.00	0.2849	
24		CCB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
25									
26									
27									

DW 9/8/09

MBAs, mg/L = $\frac{\text{Conc. (mg/L)} \times \text{Dil'n} \times 500 \text{ mL}}{\text{Sample Volume}}$

Prep Run#: 95033
Team: Metals/DBOND

Preparation Benchsheet

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908042-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904223-027	RSAU4-20BSPLP2	.06	100.00g	EPA 1312/SPLP				2,000.00mL			8081a only
3	R0904817-001	SA64-10BSPLP2	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Sulfuric Acid Reagent Grade H2SO4 M1780089K (5105)

Nitric Acid Metals Grade HNO3 M1780094F (9004)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: D Bond Date: 9/1/09

Received By: Matt Cain Date: 9/1/09 1305

Extracts Examined
Yes No

Printed 9/1/09 9:30

Preparation Benchsheet

Prep Run#: 95034
Team: Metals/DBOND

Prep WorkFlow: SPLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 8/31/09 01:05

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0908043-01	MB		100.00g	EPA 1312/SPLP				2,000.00mL			
2	R0904817-002	SA64-10BSPLP3	.03	100.00g	EPA 1312/SPLP				2,000.00mL			

Preparation Materials

Water Deionized H2O DI System (2262)

Preparation Steps

Step: Leach
Started: 8/31/09 13:05
Finished: 9/1/09 07:05
By: DBOND

Comments:

Reviewed By: Date:

Chain of Custody

Relinquished By: DBond Date: 9/1/09

Received By: Matt Cary Date: 9/1/09 1305

Extracts Examined
Yes No

Columbia Analytical Services
1 Mustard Street, Rochester, NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: DWaG Date: 9/2/09

Analysis: MBAS (Surfactants) ✓ Instrument: Milton Roy Spec 21 ✓

Quality Control: Curve Date: 05/28/09

	Same as Log Book #	Same as Log Book Date	Working Stocks Prep. Log#, Date,	Stock Sol (mls)	Stock Sol (mg/L)	Final Vol (mls)	True Value (mg/L)
a) Standards Prep:	WC92008D	5/28/2009	WC92008B, 5/28/09				
b) ICV Prep:	WC92008E	5/28/2009	WC92008C, 5/28/09				
b) CCV Prep:	WC92008E	5/28/2009	see bench sheet	150	1	500	0.3
c) LCS-LL Prep:	WC92009A	5/28/2009	see bench sheet	10	1	500	0.02
c) LCS-HL Prep:	WC92009B	5/28/2009	see bench sheet	175	1	500	0.35
d) Matrix Spike	WC92009C	5/28/2009		0.175	1000	500	0.35

Instrument log filled in? (Y) (N)

Packages:

Copy and attach Standards Preparation.

Comments: 1000 ppm Standard Stock: WC85268F

1000 ppm Reference Stock: WC92016I

Continued from page

8/28/09 GN (A) Buffer TKN
— Issue as WC92052H. Exp 1 month. 9/28/09

8/31/09 SBR (E) H_2SO_4/Ag_2SO_4 - COD Macro Digest
Dissolve 8.8g Silver Sulfate (WC852716) in a 1L vol. flask in conc. H_2SO_4 (WC92040B). Expires 1 yr. 8/31/10.

(C) 0.250N $K_2Cr_2O_7$ - COD Macro Digest
Dissolve 12.259g $K_2Cr_2O_7$ (WC76302E) and SBR 8/31/09 0.2g Sulfamic Acid (WC76161I) in 1L DI volumetrically. Expires 1 year 8/31/10

8/31/09 DPW (D) 1.0ppm LAS Working Standard Stock
Dilute 1.0mL of 1000ppm LAS Standard Stock (WC85268F) to 1L volumetrically w/ DI. Store@4°C, exp: 11/30/2009.

(E) MBAS Wash Solution
To a tared 2L Vol. flask add: 13.7mL of conc. H_2SO_4 (WC92040B) and 100g Sodium Phosphate Monobasic monohydrate (WC92062D). Bring to volume w/ DI, Store@ RT. Prep'd: 8/28/09, exp: 8/28/2010.

(F) MBAS Color Reagent
To a tared 2L vol. flask add: 13.7mL of conc. H_2SO_4 (WC92040B), 100g Sodium Phosphate monobasic monohydrate (WC92062D) and 60mL methylene blue stock (WC92017E). Store@RT and bring to volume w/DI. Prep'd: 8/28/09, exp: 8/28/2010.

Recieved from EMD
(G) 4x4L chloroform. Cat#: CX1059-1, lot#: 48171. Store@RT, exp: 8/31/2012. CAS#: 67-66-3.

8/31/09 SBR Received from VWR
(H) (10)x50 Total Chlorine Test Strips, Cat # 09941, HF Scientific Lot # 051298. Store@RT. Exp ~~8/31/11~~ SBR 8/31/09 8/31/11 (11922)

Continued to page

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TITLE PROJECT

Continued from page

8/26/09 (A) MBAS Wash solution
DPW To a tared 2L Vol. Flask add: 100g Sodium Phosphate mono basic monohydrate (WC920354) and 13.7mL conc. H_2SO_4 (WC920408). Bring to volume w/DI. Store@RT, exp: 8/25/2010.

8/25/09 (B) 1:1 H_2SO_4 - Cu Distillation
Exp Same as WC920227E Exp 8/25/10

8/26/09 (C) Hypochlorite - NH_3
NM -400 mLs Sodium Hypochlorite (WC920606F)
-400 mLs UP DI
Prepare fresh each run.

8/26/09 (D) 1.0ppm Working Reference Stock
DPW Dilute 1.0mL of 1000ppm LAS Reference Stock (WC920116L) to 1L volumetrically w/DI, Store@4°C, Exp: ~~8/26/09~~ 8/26/2010

8/24/09 (E) Iodide-Iodate Titrant - Sulfite
Exp in a 1L vol flask dilute 0.4428g KIO_3 (WC852239A), 9.25g KI (WC852255J) and 0.310g $NaHCO_3$ (WC852210) to volume with DI. Store at 4°C. Exp 8/26/10

8/26/09 (F) Ammonia (NH_3) [Lachat: LOQ = 0.050 Reg. Level, 0.010 - Low level]
NM
ICV/CCV: (TV = 0.90 mg/L)
Do ~~1:100~~ 1mL/26/09 one (1) 1/10 serial dilution of the 180ppm Reference Stock (WC852257G). Add 0.5mL of this 18.0 ppm stock to 9.5 mL NH_3 Carrier/Diluent.

8/26/09 (G) Ascorbic Acid - TPO4
- Same as WC920506C. Exp. 1week, 9/1/09.

8/26/09 (H) Eriochrome Black T - Hardness Indicator
EW Add 50.0g NaCl (WC920419F) and 0.25g Eriochrome Black T (WC692846) to a tared 8-cup, cap and shake well to mix. Store @ RT. exp 5/31/10

Continued to page

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TITLE PROJECT

Continued from page

5/25/09 (A) Buffer - TOTN
NM -same as WC92003E. Exp. 1 year, 5/28/10

5/28/09 Calibration for Surfactants (MBAS)
CMW (B) 1.0ppm Working Standard Stock
Dilute 1mL of 1000ppm Standard (WC85268F) to 1L w/ DI water volumetrically. Store in amber glass @ 4°C. Expires 1 year, 5/28/2010.

(C) 1.0ppm Working Reference Stock
Dilute 1mL of 1000ppm Reference (WC85215G) to 1L w/ DI water volumetrically. Store in amber glass @ 4°C. Expires 1 year, 5/28/2010.

(D) Calibration Standard

Cal Std	mLs DI	mLs Standard (WC92008B)	Conc.
1	500	0	0.00
2	490	10	0.02
3	480	20	0.04
4	470	30	0.06
5	460	40	0.08
6	450	50	0.10
7	425	75	0.15
8	400	100	0.20
9	375	125	0.25
10	350	150	0.30
11	300	200	0.40

(E) ICV/CCV
To a ~~5~~ 05/28/09 1L separatory funnel add 350mL of DI water and 150mL of working reference stock (WC92008C). Analyze as a normal sample.
True Value = 0.30 mg/L.

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TITLE PROJECT

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(A) LCS-Low Level

5/28/09 To a 1L separatory funnel add 490mL of DI water and 10mL of working standard stock (wc92008B). Analyze as normal sample. True value = 0.02mg/L.

(B) LCS-High Level

To a 1L separatory funnel add 325mL of DI water and 175mL of working standard stock (wc92008B). Analyze as normal sample. True value = 0.35mg/L.

(C) Matrix Spike

To a 1L separatory funnel add ~~325mL of~~ 500mL ~~sample an~~ of sample and add ~~0.325ml~~ 0.175mL of 1000ppm Standard Stock (wc85268F). Analyze as normal. True Value = 0.35mg/L.

5/28/09 5/28/09

5/28/09 (D) ~~TSN Digest Reagent~~

JHP same as WC91001D Store at RT in amber glass Exp 6/22/09

5/28/09 (E) 10% Phosphoric Acid

BB Same as WC92007H Expires 5/28/10

5/22/09 (F) Ascorbic Acid - Konelab

JHP Same as WC91002A Exp 6/12/09

5/28/09 (G) Received from CPI

BB 4 (12) x 20 Oil + Grease Filter SPE discs, Cat# 4350-13, CPI Lot# 050809. Store at O/G bench Exp: NA

Received from VWR

(H) 1 x 2.5 Kg Ammonium Sulfate, Cat# AX1385-3, EMD Lot# 43164910, CAS# 7783 20-2 Store @ R.T. Expires 5/28/14 10181

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2/12/09 BB

Ethylene Glycol

(A) ICV/CCV Prep (final vol = 1mL)
0.60 mL DI + 0.40mL 10ppm Ref. Stock (WC85268D)
TV = 4.00 ppm

(B) LCS/LMS Prep
To 1.0 mL DI or sample, add 0.30mL 10ppm Std. Working Stock (WC85268C).
TV = 3.00 ppm

(C) Glycol Std. Working Stock, 10ppm
In a volumetric flask, dilute 0.10 mL Ethylene Glycol 10,000 ppm Std (WC85241A) to 100 mLs.
Make fresh per run.

(D) Glycol Ref. Working Stock, 10ppm
In a volumetric flask, dilute 0.10mL Ethylene Glycol 10,000 ppm Ref (WC85241B) to 100mLs. Stock each run.

(E) Standards for Glycol (final vol. = 1.0mL)

Conc (ppm)	Vol. 10ppm Std working stock (WC85268C)	Vol DI (mL)
1.0	0.10 mL	0.90
2.0	0.20 mL	0.80
4.0	0.40 mL	0.60
8.0	0.80 mL	0.20
10.0	1.00 mL	0.0

2/12/09 BB

Received from VWR

(F) (1) x 1.20mL LAS Standard, 1.00 mL = 1.00mg LAS
Cat # 4350-4, RICCA Lot # 281283, CAS # 7664-93-9, 68411-30-3. Store @ 4°C. Expires 11/30/09 [EIBT]

4/13/09

(G) Phosphate buffer for UV254
Same as WC85254G. Expires 2/20/09

(H) KHP Std 500 mg/L as C
Same as WC85254H, except phosphate buffer is WC85268G + KHP is WC85062C.

2/18/09 SBR

(I) Cr^{+6} Color Reagent
In a 50mL vol. flask dissolve 0.25g 1,5-Diphenylcarbohydrazide (WC85190E) in acetone (WC85203J) and bring to volume. Store @ 4°C. Exp 2/18/09

2/18/09 EW (A) ISS R
0.2148
DI.
TV = ?

2/18/09 EW (B) Eric
Add 5
(WC69?
Stor

2/18/09 SBR (C) NC_2 (c
In a 1C
0.1C g NE
volume

(D) Ascorbic
- same

2/18/09 SBR (E) 10% Phe
- same

(F) Phenol
- same

2/19/09 (G) Cr+6 Digest
Sa

2/19/09 NM (H) NH3
- Same

(I) Hyd
- Same

2/20/09 AS (J) 0.5m
0.20
Phos
Hyd

TITLE PROJECT

Continued from page

6/5/09 NM (A) Sodium phenolate - NH3
- same as WC92004F. Exp. 1 year, 6/5/10.

(B) Buffer - NH3
- same as WC92005B. Exp. 1 year, 6/5/10.

(C) NH3 Carrier/Diluent
- same as WC92006A. Prepared solution x4.

6/5/09 CMW (D) MBAS wash solution
To a tared 2L volumetric flask add 13.7mL H_2SO_4 (WC05296G) and 100g Sodium Phosphate Monobasic Monohydrate (WC85472K). Bring to volume w/ DI. Store @ room temperature. Exp 6/5/2010.

6/8/09 GN (E) Post-Digestion Matrix Match - TKN
To a 2-L vol. flask add 800 mls TKN Digest Reagent (WC92015I) and bring to volume w/ UPDI. Mix thoroughly. Pour off 100 mL and discard. Bring back to volume w/ UPDI. Mix thoroughly. Store at RT in amber glass. Exp 7/5/09

(F) Hypochlorite - TKN
15.0 mls sodium hypochlorite (WC92005H) → 200 mls volumetrically w/ UPDI. Prepare fresh each run

(G) 0.8M NaOH - TKN
- same as WC92007C. Exp 1 month 7/8/09

(H) ~~to~~ Buffer TKN GN 6/8/09
- same as WC92002F. Exp 1 month 7/8/09

6/8/09 BB Received from ERA
(I) 1 ampule MBAS Standard, 1000 mg/L, Lot # 975, ERA Lot # 170865. Store @ ~~RT~~ 4°C BB 6/8/09 Expires 5/31/2011 10371

Continued to page

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